# SOIL REMINERALIZATION

## A Network Newsletter

Volume III, Number 11-12 FALL - WINTER 1988

*"Doing a pot test is the most convincing argument I know of. Anybody can do it. There are testing laboratory grinders everywhere. There is no lag time. In 6 hours you can get a microorganism population explosion. Taking some 6" clay pots, I filled them with a 50-50 mixture of earth and peat and 3 heaped tablespoons of dust. The results were astonishing!"*

**John Hamaker**

# Soil Remineralization

## A Network Newsletter

The newsletter is a reflection, forum, round table of ideas, experiences and research of those concerned with networking and implementing soil remineralization.

Articles, letters, and photos are welcome and appreciated. It reaches an emerging grass roots community network around the world.

> Microorganisms produce the protoplasm of all living things. Microorganisms themselves feed on the total mixture of minerals and gases in the biosphere and are energized by carbon. We can build enormous per acre tonnages of protoplasm into the soil in a very short time--enough so that sun energy reaching the plant becomes the limit of growth. The foods of microorganisms are the cheapest raw materials on earth.
>
> **John Hamaker**
> ***The Survival of Civilization***

## Eden or Ice Age- Which Will We Choose?

The book *The Survival of Civilization* by John Hamaker and Don Weaver is regarded by a growing movement worldwide as a blueprint for the survival of the earth, restoring ecological balance and perhaps, even recreating Eden.

The remineralization of forests, farms, orchards and gardens with glacial gravel and rock dust, is nature's way to regenerate and fertilize soils. During an ice age, as glaciers grind rock to a fine dust over millennia, a fertile soil is created. Adding finely ground gravel dust is a tremendous boost to organic agriculture and can make it truly viable by adding up to a hundred trace minerals and elements needed by all life and by nourishing the microorganisms in the soil, whose protoplasm is the basis of all living things.

There is evidence to suggest that as forests begin to die off worldwide, giving off carbon dioxide, the climate of the earth is altered, triggering the transition from the warm interglacial - to an ice age. We are hastening this process with the burning of fossil fuels.

Undertaking the task of remineralization is urgent to restore our agricultural soils and to save the dying forests in the temperate latitudes and stabilize our climate.

***Soil Remineralization, A Network Newsletter*** is available for $12.00, or $15.00 outside the U.S., 3-4 issues a year from Joanna Campe, 152 South Street, Northampton, Massachusetts, 01060 U.S.A.

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***The Survival of Civilization*** ($12.00) and ***The Solar or Ice Age? Bulletin*** ($5.00 donation) can be ordered from Hamaker-Weaver Publishers, P.O. Box 1961, Burlingame, CA 94010

**On the Cover:**
Giant Sunflowers discovered by Don Weaver on naturally remineralized soil in northern California. See page 8.

# In This Issue

## Media Breakthroughs

Below are some recent headlines of articles in major newspapers and publications which are finally covering cooling, and not just the greenhouse warming scenario. Let's hope this coverage continues, so that the public and policy officials can consider the alternative view. You'll be able to read these articles and more in the coming ***Solar Age or Ice Age? Bulletin*** of Don Weaver which will be out soon. See page 23 to order your issue of the Bulletin.

## A New Solstice

As I was not able to get out two separate issues at the end of the year and this is a double issue, I decided to include an issue of ***Solstice***, the excellent dynamic publication of John David Mann. He has covered extensively climate and remineralization and will continue to do so in future issues. He recently merged with the magazine Macro Muse which means that it now has a circulation of 16,000 and is a bi-monthly with 70+ pages. The new yearly subscription rate is $14.95 and a single issue is available for $3.00. He has compiled a booklet, ***Perspectives on the Climate Crisis*** which will be available soon and the price will be around $5.00. I do hope you will enjoy receiving the issue included here.

## Climate and Human Rights

Reproduced on these pages are excerpts of the Greg Watson address given at a recent United Nations conference in conjunction with the **ERS**. It deals with the climate crisis as a human rights issue and was part of an exciting program, other papers of which will be printed in the coming issue. (*Greg's paper didn't arrive in time, but will be printed next issue*) The **Earth Regeneration Society** has been busy making tremendous progress in networking their policies in official places in Moscow, Hamburg, London and now at the United Nations.

Christopher Bird, co-author of the **Secret Life of Plants** and the upcoming sequel **Secrets of the Soil**, has translated a recent article from France's magazine ***Actuel*** for ***SR***, which also presents a more balanced focus on the climate issue, and speculates on the possibility of cooling, not just warming. **Secrets of the Soil**, by Peter Tompkins and Christopher Bird, is being published by Harper and Row and will be available in book stores in March 1989. It is "a fascinating account of recent breakthroughs --scientific and spiritual-- that can save your garden, your farm-- your planet." Several chapters will deal with the climate and remineralization, and the book will be a major contribution in giving these issues a broad audience.

## Recent SR Results

John Hamaker and Leland Taylor write on the results of remineralization during this summer's drought and Hamaker addresses remineralization in semi-arid and desert regions.

## SR Networking and Projects Here and Abroad

There is news from Nepal and Cambodia, New Zealand and Australia, rock dust as a health supplement and how to get the attention of a whole town as the amazing networking activities of Debbie Dise in Ruidoso, New Mexico have succeeded in doing. Her efforts are an inspiration to us all, along with the tremendous amount of networking that Debra Vuckovich has done in getting the message out through her publication, articles and brochures which are available through her as networking tools. She is now offering to sieve and size samples of gravel dust that are sent to her, if the gravel source doesn't have sieves to help you determine the fineness of the gravel.

**The Institute For a Future**, and **Live Earth** continue major networking efforts and **Diamond Health and Food, Inc** is a local project in New Mexico, inspired by the diamond shaped

continued on page 31

## Letters

New Ice Age by 1995?

To the Editor:

*NEW YORK TIMES, THURSDAY, AUGUST 11, 1988* –

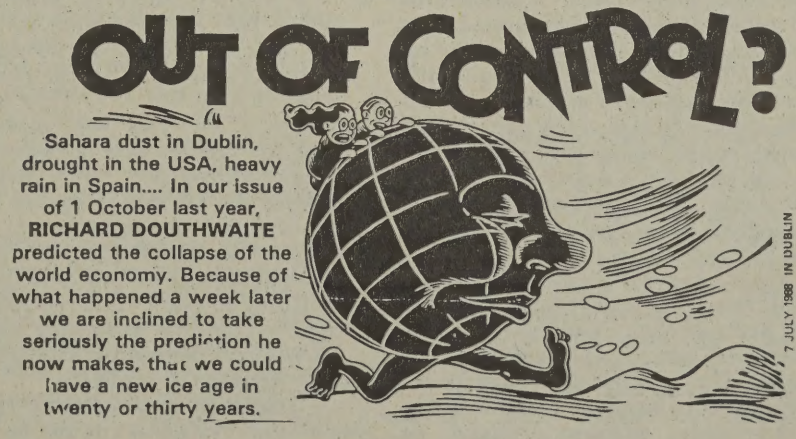
Cooler Reality Contradicts Greenhouse Theory

*Is the Crazy Weather Still Another Sign Of a Climate Shift?*

* * *

Greenhouse Effect or Ice Age, Atmospheric Hypotheses Take the Public by Storm

By MICHAEL J. MCCARTHY
*Staff Reporter of* THE WALL STREET JOURNAL


OUT OF CONTROL?
Sahara dust in Dublin, drought in the USA, heavy rain in Spain.... In our issue of 1 October last year, RICHARD DOUTHWAITE predicted the collapse of the world economy. Because of what happened a week later we are inclined to take seriously the prediction he now makes, that we could have a new ice age in twenty or thirty years.
7 JULY 1988 IN DUBLIN

# John Hamaker Responds to a Reader's Questions

*These comments by John Hamaker are a last minute addition to the newsletter. They are made in response to a letter by Judith Werner and "... some unanswered questions". The letter is printed on pages 28-29 of the* ***Letters and Forum*** *section.*

*Judith has noticed gardening articles about xeriscaping to prepare for the hot dry climate ahead, and the Department of Agriculture predictions of higher yields in the rising temperatures, whereas one might plant hardier species than usual in a growing zone if a cooling trend is underway.*

*She has also recently seen public television shows about the earth and climate changes which take the warming trend for granted and cite evidence from the earth cores that show a carbon dioxide induced correlation that is just the inverse to what Hamaker cites.*

*My own observations of articles on climate in the last 8 months is that articles often are no longer the "warming scenario" in its previous simplistic form. They seem to be more complex, considering more data and factors affecting climate, and even more open ended, sometimes even mentioning the possibility of cooling or factors that could offset the warming. I see this as a very positive trend and would like to write about this in detail in the next issue.*

*Judith requested an article addressing these issues and her letter was given to Hamaker who made the following comments, received just before sending this issue on to the printer.*

## On plans for agriculture in response to "the future warming"...

Xeriscaping? I do not find that word in the dictionary. The first part is there and it has to do with dry land. What the gardening articles are recommending I do not know. I do know that our soils must be loaded with microorganisms if they are to support crops through droughts such as that in the U.S. in 1988. The thing that is short in the diet of microorganisms is available minerals. So it comes down to remineralization.

The U.S.D.A. prediction of higher yields from higher temperatures is news to me but huge amounts of misinformation have come from the USDA so it's not surprising. What can be said is that some crops prefer cooler temperatures and some warmer temperatures, but at either high or low temperatures can be killed. In terms of the high temperatures (above 100 degrees F) which are related to the climate change, a few days at such temperatures, especially without an abundance of soil moisture, can kill all crop plants. Likewise 4 or 5 hours at a few degrees below freezing can kill the most cold-resistant plants.

Plants grown on remineralized soil are all more resistant to heat, drought, frost, and cold than those grown on soils treated with agricultural chemicals. The genetics of most crops developed for interglacial conditions is that for maximum yields without regard to nutritional content or hardiness against extremes of weather. As a result, some of the agricultural chemical people are investigating new kinds of crops which have been grown in places where there is temperature stress. This may be helpful but it can not compensate for the lack of minerals in the soil.

The microorganisms require minerals and the gases in the air to build the million plus compounds to produce life. The plant roots take up these compounds to give life to all the other life on earth. Any attempt to avoid remineralizing the soils of the earth will end in disaster for all of us.

## Glaciation or Warming?

Glaciation or warming? That is a question which many people are asking. That question has not been asked by me because the factors which initiate glaciation are all in place and increasing geometrically, i.e. at an accelerating rate.

A study of satellite pictures from 1967 to 1987 has been made by NOAA. They averaged total snow-covered area on the same fall day for the four years 1967 - 70 and 1984 - 87. They used the average of two four year periods because the year-by-year snow cover varies substantially. They found an increase of 1 1/2 million square kilometers in snow cover equivalent to a strip one mile wide and 5000 miles long. That is a significant glacial advance for a period of only 16 years. This report squares with the reports of advancing mountain glaciers and deepening snow cover in many parts of the world.

Glaciation is proceeding right on schedule. The same can not be said of the warming. The predicted early warming of the upper latitudes has not occurred. Its advocates claim a warming world-wide of 1/2 degree Celsius. That may well be since it takes a source of heat to evaporate the water for glaciation and an increase in temperature differential between the equator and the poles to move the evaporated water to fall as snow on the glaciated upper latitudes. However, it is world **albedo** (reflection back into space of solar energy), which in the long run determines the climate. A definite average temperature change is unlikely to occur for many decades. The albedo is definitely increasing. The snow cover and increasing cloud cover and desertification and deforestation are all rapidly increasing the world albedo. When the albedo is sufficiently high, the average temperature will indicate cooling in spite of the greenhouse gas concentration of heat in the latitudes on both sides of the equator. The assumption that a slight rise in average world temperature indicates a warming climate is false because it can not stop the advance of glaciation. On the contrary it assists the glacial process.

The statement that a decrease in $CO_2$ causes cooling probably comes from the fact that at the height of glaciation there is only about 250 ppm $CO_2$ in the atmosphere. That is because the oceans are then loaded with glacially ground minerals which support such a huge chain of life that the $CO_2$ is drawn down to such a low level. It has nothing to do with the initiation of glaciation. The $CO_2$ is not necessary to cause the moisture to go to the upper latitudes after a large ice field is established because there is so much cold air descending over the land masses that the warm air is forced to flow poleward to fill the vacuum left by the exit of the cold air. The fact that the $CO_2$ is lowered as glaciation proceeds does affect the amount of evaporation and hence clouds. The decrease in precipitation and the increase in melting as the glaciation moves toward the equator ends the glacial advance. When the advance ends, the flow of magma from under the weight of ice into the oceanic circulation of the tectonic system decreases. The pressure goes down and the volcanism goes down, further decreasing evaporations. When the glacial front stops advancing, the minerals flowing into the ocean decreases and over a 10,000 year period there is a massive die-out of ocean life and a rise of $CO_2$ to the highest level of the climate cycle. The land develops a mineralized soil capable of producing a massive forest growth capable of bringing the $CO_2$ down to interglacial levels. This "climate optimum" lasts for 4 - 5000 years. Then the $CO_2$ settles into an interglacial level of life support in balance with the rate at which the unused glacial grindings can cycle upward to support

# The ERS and Alden Bryant make great strides in Moscow, Hamburg, London, and at the United Nations

Alden Bryant, representing the **Earth Regeneration Society, Inc.**, provided a paper on climate stabilization at the World Congress on **Climate and Development**, Hamburg, November 7 - 10, 1988. The title: **Ten Year Gap**, which is the time between a maximum soil/forest/energy program, transferring out of fossil fuel to alternative energy forms (27 years to bring $CO_2$ down to 270 ppm in the world's atmosphere) and the time during the next 10 to 15 years when most of the world's population will be at risk from the accelerating natural disasters-heat, drought, famine, earthquakes, floods, hurricanes, freezing, and shorter growing seasons--all intensified by $CO_2$ increase together with other problems.

On December 9, in the Dag Hammarskjold Auditorium of the United Nations, an all day conference **Earth Regeneration and the Environment**, was held in honor of the 40th anniversary of the **Declaration of Human Rights** (December 10, 1948). The conference was sponsored by Malta Ambassador Alexander Borg-Olivier, and by the **Earth Regeneration Society**, with NGO (non-governmental organization) assistance.

Bryant presented the summary paper for the day entitled **Human Rights, Environment, and Climate Stabilization** developing the message from Hamburg that we are in a final emergency situation to protect human societies and speed up environmental work beyond anything we have imagined in the past. Outstanding papers were given by Professor Kenneth E.F. Watt of the University of California at Davis, Ambassador Borg-Olivier, Greg Watson and others. They can be ordered from the Earth Regeneration Society, 470 Vassar Ave., Berkeley, CA 94708, tel. (415) 525 4877.

During November Bryant presented the material in the Hamburg paper first in Moscow to environmental, science, and trade union groups; then in Hamburg; and subsequently in London to a dozen groups including two meetings in the House of Commons, one with the MP who is Environmental Leader of the Labour Party and the second as a speaker for the first organizational meeting of the **Tory Green Initiative**, the new group of MP's and others to bring environmental and climate issues to the front in the work of the Tory Party.

All groups in Moscow, Hamburg, London, and the United Nations showed an openness and deep concern for the full significance of the warming and cooling cycle driving us into glaciation if we do not stabilize the climate in time.

## Handbook for a Shareable Strategy of Coevolution with the Biosphere
## Fred Bernard Wood, Sr., PhD

Fred Bernard Wood, Sr. is publishing the **Handbook for a Shareable Strategy of Coevolution with the Biosphere.**

"To fully assess the impact of the rising atmospheric carbon dioxide, which is more complex than the simple greenhouse effect, it is necessary to coordinate information from over 25 special fields of science. Successive editions of this handbook are planned to: (1) indicate our progress in developing a general systems perspective of the climate problems, and (2) indicate a strategy of using the knowledge we already have to develop plans to change the climate cycle to protect the food supply for the five billion people on our planet."

It is published by the **Computer Social Impact Research Institute, Inc.** (non-profit), P.O. Box 5583, San Jose, CA USA 95150 in cooperation with **Earth Regeneration Society, Inc.** (non-profit) 1442A Walnut St. #57, Berkeley, CA 94709. The Computer File is TCS4. HH29. 1H. The paper file is BE/A-950-E. The price of the Handbook is $7.

*editor: This is highly recommended as a resource for evaluating the evidence and data available on climate.*

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the microorganisms who in turn support the plant life. Plant life can grow faster in the presence of $CO_2$ and it can still survive considerable depletion of the supply of microorganism protoplasm brought on by a short supply of minerals. The result is that the $CO_2$ is kept under control until there are no more minerals coming up to replenish the topsoil. Then the microorganisms die out, the plant life dies out and with it the life forms dependent on the plant life.

The warming has no more basis than agricultural chemicals. Scientists all over the world have rebelled against such a simplistic hypothesis and initiated a study of the many facts involved in climate.

The ongoing glacial advance, the demineralized soil, and the increasing violence of glacial weather which are destroying crops all over the world and rapidly reaching a crisis stage for all of us is a threat to the establishment. This massive envionmental change requires an equally massive change in the economic system. Maintaining the status quo is no longer possible.

Disinformation is probably the best possible way to keep the population from coming to a common understanding of our problems and their solutions. How long can a massive disinformation affect the thinking of the people? The fabrications of the agricultural chemical industry have lasted for about 150 years. It is endangered now only because it is failing.

The warming will not last that long because it has failed to show up and the rapidity of the onset of glacial weather violence is precipitating a food crisis. The financial establishment doesn't have 50 years to handle this problem. It will be interesting to see what happens if anything. So far the financial establishment has given grant money to genetic engineers to develop plants that will grow food on demineralized soil. What next?

Whether we call it glaciation or warming, the only answer to the food crisis is to get the greenhouse gases out of the atmosphere and restore the interglacial climate.

**John Hamaker**

*John responds to more questions on page 9. Responses to John's comments are welcome. **SR** is a forum for the network. The editor does not necessarily agree with every opinion of John (how many individuals are in total agreement with each other?) and yet appreciates very much his outspokenness and his contributions to this newsletter. The above was edited, mainly because of lack of space at the last minute. The whole text may appear in John's **Comments in the Solar Age or Ice Age? Bulletin.***

# THE CLIMATE IN 2050

BY LEON MERCADET
TRANSLATED FROM FRENCH
BY CHRISTOPHER BIRD

## *Will the World Submerge?*

***In Antarctica, the largest iceberg ever spotted has just detached itself from the ice-fields. Is the South Pole beginning to melt? Is the earth's climate beginning to become warmer? Or, on the contrary, are we on the eve of a new glaciation? Both at once, perhaps, and climatologists are at one another's throats.***

*First published in the magazine, Actuel, June 1988; this article is translated from French by Christopher Bird, co-author with Peter Tompkins of the forthcoming book,* ***Secrets of the Soil,*** *to be published by Harper and Row, New York.*

*Bird comments: "The article sent by my daughter, Lehua, impressed me on several accounts. First of all, unlike recent extensive discussion of the climate in Time and Newsweek cover-stories, it presents the cooling side of the question, not just the warming side.*

*Secondly, it gives a balanced overview of the complexities of the subject, while indicating why most climatologists cannot meet public demand for a clear explanation.*

*Thirdly, it presents at least one facet of important Soviet research --the taking of mile-long snow cores in Antarctica-- though failing to add that the Soviets have also been coring the tundra in Siberia and elsewhere, to reveal a southward spread of permafrost."*

*(We would welcome comments on Mercadet's article.)*

Last year, an iceberg called B-9 became detached in the Ross Sea in Antarctica. It was the largest iceberg ever seen: 4,750 square kilometers, the size of the average French *departement.* As high as the Eiffel Tower, it could slake the thirst of a city the size of Los Angeles for seven centuries. But B-9 will never get to Los Angeles.

B-9 is not the only iceberg to set forth on a journey to warmer seas before finally melting in them. Since then, many more and much larger icebergs have been breaking off at the fringe of Antarctica. Slowly the world's sixth continent is crumbling away.

Why? American climatological specialists who have been following B-9 come up with only one explanation: the earth is becoming warmer, its temperature is rising. But they are quick to add that they are not sure about this. NOAA (the U.S. National Oceanic and Atmospheric Administration) has had access to satellites only over the last 12 years to allow it to take dependable records of Antarctic temperatures.

Yet, it would seem that "things are getting warmer"; this empirical observation, which any Frenchman could have made this past winter (1987-88), is not refuted by science. After having perused millions of recorded data on all continents for over a decade, a great many specialists are in agreement about this tendency. But not about its amplitude: from 0.2 or 0.7 or even 2 degrees centigrade. It all depends. . .

Then, there is an odd detail of enormous interest related to the icebergs themselves: the warming is not uniform. Minimal at the equator, it above all affects the poles. A 0.7 degree global rise in temperature could possibly lead to an addition of 2 degrees at the poles. This would be enough to begin to melt them. Are we confronted with the beginning of such a process?

One can easily guess the principal effect of an eventual polar debacle: a rise in sea levels. If Antarctica and Greenland were to melt, sea-levels would increase by 68 meters (217 feet), plunging Paris 30 meters (96 feet) under the sea and drowning all the great coastal metropolises from New York to London and from Cairo to Tokyo.

A catastrophic scenario, but one that is highly unlikely over the short term (let's say the 20th century) if one believes the words of Gerard Lambert, a researcher at the CNRS (French National Scientific Research Council) lab at Gif-Sur-Yvette: "Wow!" says he, "when one talks of climate, one must proceed a step at a time. Interactions in it are very complex: what causes ice to melt is not the air, but the water in which it is bathed. But we hardly understand the relationship between warming of air, on the one hand, and warming of water on the other. So even if the poles become 6 degrees hotter by the year 2050. . . Antarctica would certainly diminish in size but no one knows by how much. In any case, an ocean-rise of 70 meters seems to me to be wholly out of the question."

Even if this worst scenario can be avoided, a mini-rise of only 10 meters (32 feet) is hardly to be welcomed. Coastal cities such as Calcutta or Bordeaux, would not survive -- and one would have to travel by boat from the White House to the U.S. Capitol in Washington. What is the probability of such a rise? "It's impossible to say," replies Robert Delmas at the CNRS glaciology laboratory in Grenoble. "But you should realize that a sea-level rise of only a meter would submerge all of the Netherlands and Bangla Desh, so you can appreciate the problems it would cause for 100 million Bengalis."

Such consequences are sufficiently troublesome to cause a growing number of climatologists to become interested in the causes of global warming. To simplify, let's divide them into two schools of thought: Naturalists and Anthropo-centrists. For the naturalists, the climate evolves as a function of vast astronomical cycles-- an irregular rotation of the earth about its axis around the sun, which lives its life, inflating then deflating, offering us more heat or less as a result. Conclusion: these cycles are beyond our ken... one can only make observations and try to foresee fatalities.

The anthropo-centrists do not deny these celestial pulsations, but underscore artificial modification of climate brought on by we ourselves

through the mania of our actions, our fire-making, our construction of industrial factories. They note that a global rise in temperature seems to coincide with the start of industrialization about 1850. This has led to the now well-known "greenhouse effect": polluting carbon-dioxide gas (the content of which, as measured, is increasing in the atmosphere) is accumulating at an altitude and is trapping heat-carrying radiations that are emitted from the surface of the globe. Instead of dispensing in the cold region of the sky, this heat stagnates and envelops us in a thicker and thicker cocoon.

The anthropo-centrists conclude: what we have done we must now contemplate undoing. Reduce industrial pollution, including the size of our livestock herds. Methane emitted by billions of cowpats plays a not insignificant role --yes indeed!-- in the greenhouse effect. In brief, we must cut rapidly back on our wood, coal, and petroleum-burning activities. An apparently ecological decision as a result of which one can immediately descry horrible perverse consequence: a tailor-made argument, offered on a tray, as it were, to nuclear energy proponents to lobbies which dream of seeing dozens of atomic-energy plants replacing these old sources of energy in every country of the world.

That provides food for thought: the only way to avoid both the greenhouse effect and the atom would be a consciously-effected stoppage of economic growth, at least as presently practiced.

Those loathe to think about this can be assured: they have a good chance of being spared this fundamental, perhaps salutory occurrence.

The earth's climate turns out to be so complex an entity --one that can be said to be "alive"-- that the same specialist who backs global warming will explain, in almost the same breath, that there is also a tendency towards cooling. Thus: the earth is both warming and cooling. For there are other phenomena arising to combat the greenhouse effect.

*Cold-warmth*: the two tendencies are simultaneously co-habitating and dueling with each other.

And, here too, we meet once again with the origin of a cold-snap, in the form of the "odd couple": human-made pollution/cosmic pulsations. This pollution amounts to billions of tons of dust which, each year, people spew into an atmosphere that becomes veiled by it. These chemical substances in suspension, quite different from carbon-based matter, do not lead to a green-house effect but, quite to the contrary, block solar radiation from reaching the earth's surface. Volcanoes, exploding one after another, play the same veiling role.

Moreover, there is above all a good deal of talk about a new "Glacial Age", a return of glaciation as in the days of the hairy mammoths. Far from disappearing, the ice-fields would seem to be mounting their counter-attack: an incursion of tepidly mild regions, and a re-establishment of the same extent of occupation that they held 20,000 years ago when the site of present-day London (England) was located at the very foot of the Nothern polar glaciers, and a sea of ice went southwards all the way to Lyon (France). The first Asians, who were then discovering Amazonia, came from the Bering Sea to find, in the heart of South America, not jungle, but steppe! *The huge Amazonian jungle is thus younger than the humans who watched it grow and who are today killing it.*

So it might be that this Ice Age is a boon and it is the ice itself that today alerts us to it. For years, glaciologists have been boring the frozen skull-caps of Greenland and Antarctica to bring back from their bowels ice "carrots", or cores, which, the deeper they lie, the older they are. After ten years of travail, the Russians have got a record for this work at Vostock (Antarctica) by removing 2,200 meter-long (mile and a quarter) cores of snow that fell 160,000 years ago. What do these cores reveal to us? The history of the climate, for they imprison micro-globules of air which bear witness to modifications of the earth's atmosphere over time.

We therefore know, that for about 12,000 years, we have been living in a "climatic optimum". "It's good weather today, real balmy!" Before this optimum which we presently enjoy, our Neanderthal and Cro-Magnon ancestors endured the vicissitudes of a glacial age, lasting about 100,000 years, that itself followed another optimum (or "inter-glacial age"), and so forth. This dating, confirmed by other measurements made on terrestrial sediments, allows certain climatologists to attribute to warm optimums an average duration of only 10,000-12,000 years. The conclusion must be that we are approaching the end of an "entracte" --to use a theatrical analogy-- and will soon hear the bell ringing to announce the next act: glaciation. Whether it will start 50 years or 5 centuries from now, no one knows for sure.

What seems well-established is the rapidity of the flip-flop. A new glaciation can take place over only a few decades. It depends on a relatively small variation of average temperatures. In temperate latitudes, only 3-4 degrees would suffice. This rapidity leaves no time for species--animals and plants-- to adapt, so it will lead to mass extinctions.

This glaciation could take place unless it is retarded, or even cancelled out, by a greenhouse effect and the warming it would bring on. Even the experts are at sea in all this, so how can the layman chart a course? The science of climate proceeds crab-wise according to known linkings: the more funding, the more researchers, the more computers available lead to more accumulated data ("we know more") but also to more and more complex parameters (so "we know less"). The more politicians and people in the street become alarmed and demand clear-cut explanations, the more the experts take refuge in prudence.

One could well ask, for example, if the leading atmospheric "star" of the past two years, the ozone hole directly over Antarctica (now joined, it is thought, by its smaller northern brother) does not play a role in the crumbling of the ice-field and the calving off of icebergs like the B-9, just because it would allow more solar radiation to filter through the atmosphere to the Antarctica ice-mass. Reply: "Maybe yes, maybe no!" Because of a lack of data that are both too far apart and too recent, with respect to climatology, links in an information chain must be much closer together to allow for real progress.

On the other hand, it is known that CFCs (chloro-fluoro-carbons), issuing from aerosols, from synthetic textiles, and from cooling circuits in refrigerators, are responsible for the destruction of the ozone at high altitude and contribute to the greenhouse effect along with carbon dioxide and methane.

According to some observers, the heating and cooling, far from annihilating each other, are mutually destabilized by their very cohabitation. Which is why we have had erratic weather over the last few years. Last winter, (1987-88) in France was ultra-balmy, but do you remember the ones that came just before? Out of the ten coldest winters recorded by the meteorological center at Redding, near London, since 1945, five were concentrated in the period between 1979 and 1987. During the storm of October 15, 1988, which ravaged southern England, the wind blew at 150 kilometers/hour (90 miles/hour). Such powerful blasts of air had not been seen in England for 250 years! Drought continues to dry up the Sahel in Africa, but hurricanes are multiplying in the Fiji Islands of the South Pacific.

We might, in any case, admire a coincidence that would support the idea that a glaciation would be getting underway just at the moment it is needed to avoid melting of the poles and the submersion of the coastal plains. Or perhaps, the inverse is true: carbonic pollutions coming to the rescue to prevent a long purgatory in the "deep-freeze". One thousand centuries of cold. B-r-r-r-r.

# Remineralization
## *Must Take Place Along With*
# Reforestation Efforts Worldwide

### John Hamaker in a recent letter to Science Magazine

The William Booth article, "Johnny Appleseed and the Greenhouse," (Science, 10/7/88, p. 10) is an accurate reflection of the fatal lack of understanding of the present climate crisis. Hall's, "I don't know if we're going to be able to significantly alter atmospheric carbon by planting trees, but so what? You haven't hurt anybody by planting trees on marginal lands, " pretty well expresses the general misconception.

It is useless to plant anything on marginal soils unless first remineralized. As recently reported on TV news, it takes 10 years to get a 3 foot tall tree in Yellowstone National Park. In sharp contrast, the slopes of Mount St. Helens (remineralized from the dust of the explosion), have a rigorous growth of trees and wildlife. Crop soils, which also received a remineralization from the dust of the explosive eruption, have doubled their yields. You couldn't ask for a better demonstration of the fact that the soils have become demineralized in the 10,800 years since glaciers last remineralized the soils by their massive grinding action. If there is any doubt, one need only put about an eighth-inch layer of ground gravel dust all around that 3 foot tall tree in Yellowstone National Park. In less than six months of growing season that tree will be seen to have greatly increased its growth rate.

Grinding the mixed rocks of the earth as they occur in the gravels makes a large quantity of minerals available to soil microorganisms. At this time the soils are largely depleted of minerals which means that microorganisms are dying out from starvation. The microorganism protoplasm compounds are the food of plants which in turn are the food of all living organisms above the ground. As the microorganisms die back, all other life must die. So even without the destructive weather (caused by the climate change toward glaciation) humanity must die back.

Demineralization of the soil is the basic cause of the present climate change. As the forests die out, and burn for lack of a deep enough topsoil to hold adequate water for the trees, they lose their collective ability to control the $C0_2$ and related gases in the atmosphere thus setting off the chain of reactions which bring about glaciation.

We are well into the period of the death of living organisms. We lost 20% of world food stocks in the last crop year, and we will lose more this year. It can only be a few years until food supplies run short. The lead time for getting a worldwide effort underway is such that many nations will suffer chaotic conditions of mass starvation before an effective effort can be mounted.

The future of civilization now rests on the ability of the less populated industrial nations to mount and maintain a program of remineralization, reforestation, and biomass forests to replace the environment-contaminating fuels. In about four decades we might be able to restore and improve the interglacial conditions which make life possible by getting the "greenhouse gases" back into standing forests and greatly deepened topsoils. Our only chance of success rests on a subordination of everything else to the survival effort.

Talk of reforestation without remineralization is useless. Calculation of the carbon sink capacity of standing forests is of no value because we must grow forests such as those of the climatic optimum which would dwarf present forests. To do that we must feed enough soil organisms to deepen our topsoils in excess of three feet. Talk of reducing fossil fuel use is just wishful thinking. We have to **eliminate** fossil fuels.

Lovejoy says reforestation will buy time. Unfortunately when the soil organisms are dying out, there is not time to buy. Nature has given us a dictum: Feed the soil organisms or die.

**John Hamaker**

# *Don Weaver Discovers Giant Sunflowers On Naturally Remineralized Soil*

During my Sonoma County land exploration in late August I found another good example of naturally remineralized soil -- here is a picture of volunteer sunflowers growing "with no fertilizer" in the garden at the Schoolhouse Canyon Campground, next to the Russian River near Guerneville. The garden is on the river floodplain which has of course received fresh deposits of soil microorganism food (both inorganic and organic) many times in the past, although not annually as in the Nile of old (pre-Aswan Dam/ Ethiopian highlands drought) due to the garden's distance from the much smaller Russian River, I imagine.

The seeds as well as the seed heads of these "gentle giants" (I'm 6'6" myself) were unusually large and quite delicious as expected. The very nice couple who care for the campground said the local agricultural advisor told them that this soil "could grow anything" (without "fertilizer"). Isn't it strange how slow most of the world's agricultural advisors seem to be in learning the "lessons of the river", the glaciers, and related fertility regeneration processes of the Gaiasphere?

**Don Weaver**

## A Reader asks...

I am writing because I have one big question that I can't seem to find the answer for. If rock dust is so full of minerals, then it would seem that sand is too. Isn't sand ground-up rock? And if sand is full of minerals then the desert must be the healthiest soil of all.

My interest lies in reversing desertification in Africa. Since the desert is all sand, what it lacks, of course, is biomass or humus. And it takes top soil to grow healthy vegetation. I had hoped that soil remineralization would help me in my efforts to help reverse desertification, but I continually get the same response when talking to people -- isn't sand rock dust?

What is the answer to this? I know that planting trees is a sound way to produce top soil, but trees will hardly grow in sand. Any information you may have on this would be appreciated.

I would also love to hear a comment from you as to how you deal with people who oppose soil remineralization.

**Marian Rose**
Kalamazoo, Michigan

## ...and a response from John Hamaker

### *Remineralization in deserts and arid regions*

River sand deposits tend to be passivated (the outside mined of minerals by the microorganisms). Grinding is necessary to make them active in supplying fertility. Wind blown desert sands apparently have the outsides abraded off and removed from the soil in dust storms. At any rate all the deserts I know of are quite fertile and spring to life when they get a brief period of rainfall.

I have often thought that since large quantities of sand are available in river deposits and deserts that large volumes of dust could be made available using standard road construction and maintenance equipment. A flat airport runway preferably covered with sheet metal would be covered with a thin layer of sand by distributor trucks. They could be followed by heavy road rollers, then water spray tanks, then road graders to windrow the dust, then front end loaders to pick up the dust and put it in dump and spreader trucks for delivery to stock piles or point of use.

Alternately one or two passes through a roll grinder will probably convert sand into a suitable dust at a fast rate.

Wherever sands devoid of gravel are available, they can probably be turned into dust quickly and economically in large volume. Sands are indeed just bits of gravel with much of the work of grinding already done by natural processes.

Sand by itself can not support growth in arid regions because it is so porous the water passes quickly to the bottom of the sand. There is, therefore, no practical way to grow food in the deserts of Africa. Those areas became deserts because they lost their rainfall due to the increasing $C0_2$ level and resulting temperature differential which is causing the circulation of winds to carry the moisture to the upper latitudes. The rains will not come back to the desert areas until the soils we have left are remineralized and the $C0_2$ (and other greenhouse gases) are removed from the air. Gravel dust for remineralization purposes is gravel that has been reduced to water-entrainable particle size so rain falling on the soil and percolating downward will carry the dust into the topsoil. Sand is too large to be carried into the soil by rain. The other advantage in grinding to such a small size is that the total surface area of unpassivated stone surface is greatly increased by grinding. The minerals are thus made highly available to the microorganisms for building the protoplasm compounds which feed the plants and hence all the above ground organisms.

The only lands where desertification can be reversed are those which are just starting to yield to wind erosion and the small particles are blowing away in wind leaving the sand. Our western range lands are showing the ripples of sand, the precursors of sand dunes. Overgrazing has removed so much of the topsoil minerals that there are not enough microorganisms to hold the land against wind erosion. If those lands are remineralized now the grasses will come back to hold the land, and if the land gets dry the protoplasm will "glue" the dry surface together to resist wind erosion. Thereafter the number of livestock per acre must be limited to what the land will carry without grazing the grass down to the roots.

### *For those who oppose Soil Remineralization...*

The only people I have found to be strongly opposed to remineralization are the agricultural chemical people who will lose their jobs if chemical agriculture is replaced by natural agriculture. Farmers quite generally understand that their soils are demineralized and they will switch quickly if dust becomes available to them.

The only real difference between Mississippi Valley soils and the western soils is that one is being carried away by water erosion and the other by wind erosion. Only by remineralizing can both soils be saved. The minerals are food for the microorganisms. They alone can protect soils against wind and rain erosion and supply the protoplasm compounds required by all the rest of the living organisms. Without them we must die.

## *Alaska Soils Remineralization Association*

Alaska Soils Remineralization Association is a newly-organized state-wide group in pursuance of:

(1) An educational, not-for-profit membership organization dedicated to remineralization of soils for their highest sustainable yields;

(2) Furthering research and development in all aspects of agriculture, agronomy, tree cropping, weatershed management and related studies;

(3) Conducting seminars, workshops and circulation of information and newsletters to encourage sane and sustainable use of our soil and natural resources.

Material available through:
Alaska Soils Remineralization Company
PO Box 60183
Fairbanks, Alaska 99706
Tel (907) 479-8941 or (907) 488-2841

(A) Basalt Dust
(B) Alluvial Meal
(C) Sedimentary Flour

For information, write or call:
Tanana Valley Chapter Coordinator
Paul Dozier
PO Box 58615
Fairbanks, Alaska 99711
Tel (907) 353-6878
(907) 488-9785 home

Matanuska Valley Chapter Coordinator
Rod Pankratz
HC30 12016 V
Wasilla, Alaska 99687
Tel (907) 376-7476

# Results of Remineralization *during this year's drought*

## by John Hamaker

### August 6, 1988

I thought readers might be interested in what a remineralized garden can do in a drought. The soil was dry and cold until we received a third of an inch of rain in early April.

The clodbuster came in 50 lb bags. We sifted them over the garden and spread the dust with a snow blade on an 18 horsepower tractor, plowed and disked the soil, and planted cabbage on the 12th of April. We finished planting the garden by May 1st.

The extreme dryness of the soil from early April to Mid-June is indicated by the poor rate of corn sprouts. A small tasseled plant was one of the few plants of the first planting which managed to sprout. The rest of the sprouts were trapped under the dry crust. The larger plants were a replanting about three weeks after the first planting. With three weeks of good growth after the soil moisture became adequate, those plants are now tasseled about five to nine feet, which is not bad for golden bantam corn.

Incidently, a stalk of volunteer field corn from last year which went through the drought period is now up to about 8 feet tall. It looks like it would give three good ears. The sparse first planting of sweet corn is about 30" tall to my surprise. I don't know how it got pollinated, but the ears had a full set of grains.

White potatoes were caught by the drought and matured before the soil moisture could give them a good growth. Sweet potatoes have a long growing season. The size of the leaves and the vines will ensure a good yield in the fall. The few cucumber plants that sprouted have already been heavy producers. Those huge leaves make sure of that.

On the east end of this garden, I planted grass seed. Grass is a high protein plant and during the long drought period it established itself. When I chewed up the grass with a rotary mower on August 1st, the grass seed heads were chin high. I expect it would have made 150 bales of hay per acre.

At one point in the drought period, the soil on top contracted into pancake-size cracked soil such as seen in a dried up pond bottom.

I tried to cultivate the garden when the crust was dry and hardened by the dried-up microorganisms, but my little cultivator would not penetrate the crust enough for the tractor; the plants were too big to use the cultivator. The garden is now known as Annie's Jungle. But if you can find the muskmelons, watermelons, peppers, etc., they are well worth the search.

I suspect it is better to have a grassy, weedy garden than to break the hard crust which protects against wind erosion, probably protects the underlying moist soil against evaporation of moisture and excessive temperature, while allowing for air circulation through the cracks.

I interpret the smile on the head gardener's face as relief; relief from four years of trying to scrounge up meals from an inadequate supply of second rate food. The radishes were crisp, juicy and sweet. When you can say that of red radishes at around 1 1/4" diameter, you know the soil minerals are producing a lot of microorganisms. The surprising thing is that those radishes held to life through weeks of drought as tiny sprouts until the soil moisture was adequate for growth.

We have remineralized two gardens, one in Michigan using gravel crusher screenings and one in the Ozarks using a natural ground glacial gravel from the southern Rockies of New Mexico. The results are the same--top quality plants in abundance with great resistance against drought and frost, and of superb flavor.

**"It is...imperative that all who can manage to remineralize a plot of ground should do so for their own security to relieve the general food shortage to that extent."**

**There is no better insurance against food shortage than a remineralized soil.**

Crops which mature in a drought are certain to give a poor yield. That endangers the Spring wheat harvest. Diversification to furnish substitute crops is highly desirable. Pastures and hay fields are almost certain to give food yields at some point in the growing season if they are remineralized.

The advantages of remineralization are readily apparent to anyone who remineralizes a plot of ground at 10 tons of gravel dust per acre. Our garden this year was lucky in that it received a 5 3/8" rain at the end of June. If it had been only an inch, the story might have been a lot different because the bone-dry subsoil would have pulled the moisture out of the topsoil before the plants got a good growth. For greater crop security, a deeper topsoil is highly desirable to improve the capacity to hold water for longer periods of time. That means we must *continue* adding minerals to the soil.

For additional security, we are trying to get our greenhouse complete this year. The beds have been filled and remineralized with Ozark ground gravel dust. Maybe we can get some fresh cool temperature vegetables through the winter.

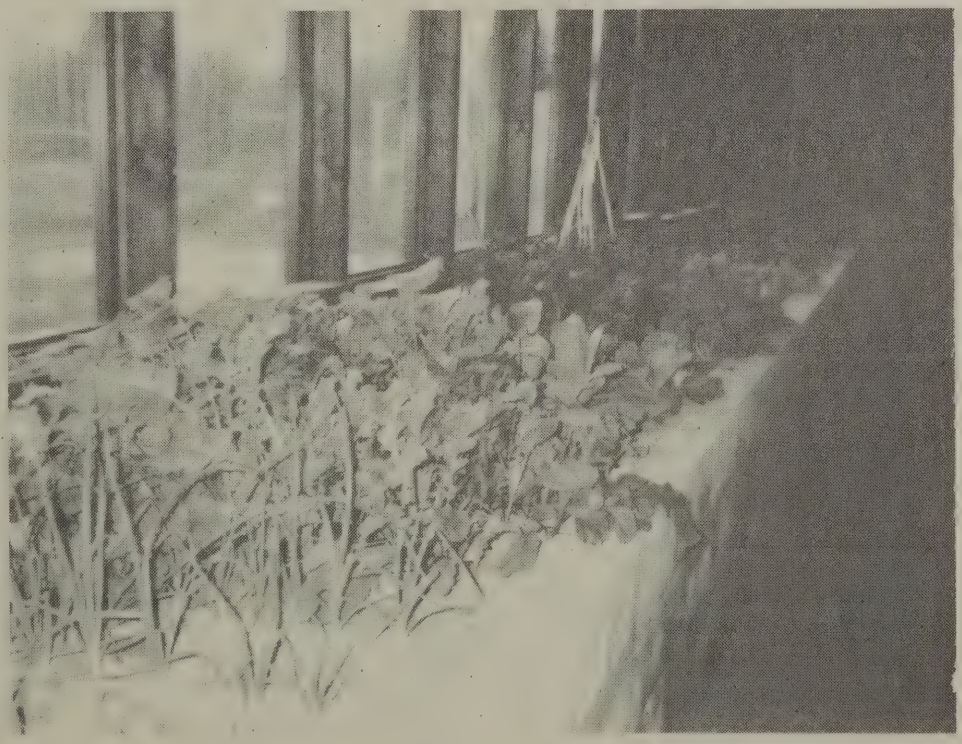
The *drought*, coupled with worldwide crop damage in the 87-88 crop year is likely to put the "temperate zone" populations in a food shortage position from now on. There is no reason to expect any improvement in the situation in the immediate future. It can only get worse. It is therefore imperative that all who can *manage* to remineralize a plot of ground should do so for their own security and to relieve the general food shortage to that extent. We cannot make real progress until a gravel grinder industry is developed.

## Update November 1988-

We went back into drought after a soil saturating rain in late June. The sweet potatoes got some rain in late September which boosted the yield. We finally got the greenhouse built and it is giving us "greens" daily.

I have never seen plants perform under such severe drought stress. The ability of plants on remineralized soil to sprout and to hang on until they get the soil moisture to grow is a real eye opener.

The above picture was taken recently. The picture below was taken some time ago when the sun lit only the bed under the windows. You can see we had an abundance of radish greens.



# Soil Remineralization, Clodbuster and Drought Damage *Reduction*

## *by Leland B. Taylor*

Not since the "Dirty Thirties" has the opportunity to prove that living soils prevent or at the least greatly reduce crop losses for lack of rainfall as 1988 so tragically proved.

Adequate quantities of all essential mineral plant foods, in plant-assimilable form, must be present before those myriads of beneficial organisms will spontaneously occupy any soil. As John Hamaker has repeatedly emphasized, when the soil environment is suitable, those beneficial organisms will quickly arrive.

There can be no argument that pulverized glacial gravel will fail to induce the tremendous biotic activity essential for the most profitable farming--drought, or with suitable rainfall. However, energy and financial costs, availability, and other concerns continue to make the universal use of glacial gravel dust impracticable for many. That is particularly true ever since "the bottom fell out" of the farm commodity markets early in this decade.

To keep fertility reclamation costs generally affordable, substitute minerals have, throughout the past 22 years, proved profitably effective. But none of those years even came close to almost universally destroying conventionally fertilized crops as did the weather of 1988.

The crop failures which were so widespread in 1988 also confirmed what University of Nebraska (Lincoln) staffers have been warning of throughout this decade, "Irrigation will not insure corn pollination during periods of intense heat." ASCS yield estimators, in determining the extent of "drought" damage to crops do not consider whether that crop is "dry land" or "irrigated". Having irrigation affects the disaster awarded only because the irrigation probably resulted in higher ten-year ASCS yield averages than the neighbor, without irrigation, chalked up.

Bill and Charles Engle at Ogallalla, Nebraska grew a "circle" of Blue Corn. Across a dirt road, they grew another circle of hybrid corn with blue kernels. Both of the Engle circles produced profitable crops. A half mile nearer to the highway, a neighbor had a circle of conventionally fertilized, hybrid corn. Despite his irrigation, pollination was so poor that he got nothing but nubbins so small the majority would fall through his combine. (The Blue Corn brought $.16 a pound under a "certified organic" contract to produce $1200 an acre income; the neighbors' disaster corn brought only fodder and Federal Welfare assistance under the drought disaster program.)

As John Hamaker has repeatedly explained, the nitrogen for that profitable circle of Blue Corn came from the remains of the beneficial soil organisms which spontaneously occupied the completely mineralized soil environment on the Engle Farm.

After sixteen years of organic farming, Glen Everett of Gnadenhutten, Ohio realized that his yields had been dropping steadily from the "manure, rotation and tillage" practices. When he called for help, his best corn was estimated at 70 bushels an acre (1985--a good year in Ohio). His alfalfa was eight inches high and in full bloom; his soybeans were limited to two pods per station and stalks were short.

Detailed soil analyses of his 28 fields and pastures showed a harmful surplus of phosphate on all samples, but almost universal deficiencies of all other minerals. To get calcium levels headed towards the ideal, he needed to apply calcite lime to some; dolomite lime to others and to several, gypsum. His 700 acres, in fact, required 28 different blends, plus geologically concentrated humus. The humus is necessary to granulate soils to provide suitable physical environments (half solids, half space--the space utilized ideally--half for air and half for moisture).

Despite having spread the liquid manure (slurry) from a half-million gallon slurry tank, the Everett soils lacked humus--as with most soils, mere organic matter oxidizes rapidly during any heat wave, so his organic matter levels were low.

A year later, despite what most in that area referred to as drought, Everett chopped 40 tons of silage per acre; picked 150 bushel corns of corn and averaged seven tons of alfalfa hay. His soil organic matter averaged jumping one percent --for an increase of 10 tons per acre-- the remains of those beneficial organisms which spontaneously occupied the suitable environments his humus and minerals had completed. To achieve such intense biotic activity had required 14 semi loads of mineralized humus; only seven loads were required for 1987.

But 1987 was so dry that a neighbor, attempting to grow corn in a former swamp, got that swamp dried sufficiently to grow a good crop of corn for the first time. 1988 was so dry that not even the swamp produced. The photos (next page) show Mr. Everett in his 150-bushel corn and in the total disaster just across a dirt service road.

### Note:

Because he keeps such accurate records, the 1988 performance of the Lorin Gatz Farm in Polo, Illinois is a prime example of the profitable difference in fully mineralized, biologically active soils. On August 8 when I visited, Lorin stated, "Sure I've got good crops, but so do my neighbors in spite of only 1.8 inches of rain since April 1."

On September 16, Lorin had facts--not merely his observations while "windshield farming" his neighbors' fields. "My neighbors have no crops," he volunteered. "Three have been disaster evaluated and were rated at 0, 0, and 2 [bushels of corn per acre]."

In the third state to be declared a total disaster for 1988, Michigan, the certified Organic Farmers who have added science to their non-toxic farming methods offered, "My crops are the best ever." By September 14, Ernie Fordos of Merrill, had harvested most of the varieties of dry edible beans and so could verify his yields. "We're recognized as the producers of absolutely the best dry edible beans," he chuckled; "we set our own prices. These certified, edible soybeans, for example, bring $30 a bushel--they are used for making soy milk and the processor can't get anywhere near as much of them as he needs to fill the orders."

***"...all essential mineral plant foods, in plant-assimilable form, must be present before those myriads of beneficial organisms will spontaneously occupy any soil. As John Hamaker has repeatedly emphasized, when the soil environment is suitable, those beneficial organisms will quickly arrive.***

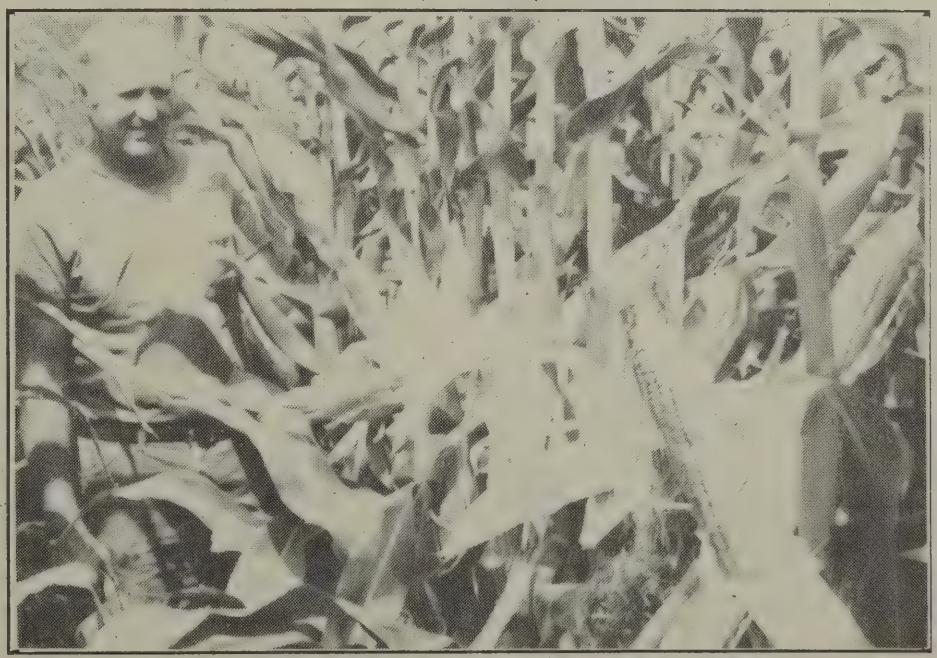
***There can be no argument that pulverized glacial gravel will fail to induce the tremendous biotic activity essential for the most profitable farming -- drought, or with suitable rainfall."***

A neighbor, Lee Shepherd of Hemlock, showed a 20-acre field of a special variety of Japanese favorites, "This field will average 2,000 pounds per acre and I've got them contracted at 90 cents a pound so that will will bring in $1800 an acre." He is paid 10 cents a pound for all the certified organic open pollinated corn he can grow. Because of the extreme moisture shortage most of the growing season of 1988, his open pollinated corn was expected to make only 80 bushels an acre--for an income of $480 an acre.

In California and in Arizona there was no shortage of irrigation water but the "manure, tillage and rotation" certified organic growers had been unable to grow the insulating ground cover needed for lowering vineyard temperatures. However, Steve Pavich, with a total of 1300 acres of certified organic grapes in California and in Arizona had completely mineralized his vineyard soils, produced excellent ground coverage and outproduced even the chemical producers of seedless table grapes. With 500 boxes an acre being considered an excellent yield, Pavich and Sons marketed 1700 boxes per acre and were paid $24 a box. Yet their mineralization-humus costs came to only slightly more than $100,000--considerably less than conventional operators pay for chemical fertilizers.

But it's as ACRES-USA quoted L. A. Hilgendorf of New Hampton, Iowa: "People are really stubborn." A staffer of the Texas Department of Agriculture, for example wrote me, "How do you get farmers to change from their environmentally destructive, profitless methods to Biological Farming?" The only answer to that problem is to constantly provide them with facts in the hopes that such facts will eventually counteract the constant onslaught of chemical propaganda emanating from the USDA and the agricultural colleges.

Everyone in Eastern Ohio blamed drought for their absolute crop failures except Glen Everett, Gnadenhutten. Glen poses (above) in a near neighbor's destroyed crop and (below) shows his 1988 silage corn. "It won't makes as much silage as the past two years--the ears are an ear's length lower than last year, but I'm confident my corn will shell out just as heavy as last year." That was Glen's third year of Fertimax farming.



# News from Nepal

Dear *SR*,

I am now writing about my recent experiences in the DOLPO region of Nepal, a region similar to the Hunza region.

There I found the soil mixed with rock chips and gravel. No fertilizer has been used until today. Apple orchards grow to fruit in great abundance almost wild. Vegetables and clover for soil enrichment that I introduced last year have given outstanding results. It can be a great place for research on Mineral/Glacial rocks and dusts. Radishes grow 2 1/2 ' and cauliflowers up to 9 kg (about 20 lb).

In Kathmandu, too, vegetables grow to a very large size. The farmers use "Kalimati", black soil from hundreds of feet below the surface. Old traditional vegetable growing is practiced even now. But farmers have started some use of fertilizers, realizing its bad aspects fully.

On my terai research farm, I had flooding last year. It left 2 - 6" of alluvial mineral mixed soil deposit. Thatching roof material that usually grew 3 feet grew to 6 foot heights this year.

The canal plantation, 50 km on both sides, is three years old. Seesum trees have grown up to 25 or 30 foot heights. This is purely due to the rock sediments in the canal water that originates in the Himalayas.

I will be in Europe and the U.S.A. in March 1989. I would like advice and help on the following:

1. To see for myself the various rocks and gravels used by the small industries.

2. Grinders. I can arrange now to have one produced in India or Nepal. This I feel is the missing link. All our works and talks will succeed if and when we make an appropriate grinder. Please send a) a copy of your survey of TSOC readers who support the promotion of rock dust remineralization; b) the name of the best potential organization or person to participate in a private enterprise/joint venture gravel dust business here; and c) all grinder designs and people who are working--the best mechanical engineers you know.

We have many practical mechanics in India. They are great with their hands and brains, wise and experienced rather than formally educated white collared workers. They work for honor, hence are reasonably paid. If in the West with all its wealth and scientists we have not yet been able to produce a "small grinder" that could save the world, let us focus our attention towards the East. In Nepal we have a number of small mountain water turbines working which were made in Nepal and developed in the last 10 years. Appropriate technology is now **born and living** here. India has the human and mechanical resources, too. Advice in this regard would be appreciated.

Our ruling Monarchs, our beloved King and Queen, are both keen ecologists and take an interest in the Living Earth. My friends are now also alert to remineralization. Following is a copy of "Come to Kathmandu," my letter to Living Earth Magazine published in England. This invitation applies to all SR/Hamaker coordinators too.

I end with high esteem and regards.

Yours ever sincerely,
**Aditya Rana**
Babor Mahal Villa
Kathmandu, Nepal

# Come to Kathmandu

As a child I loved cows, vegetable and flower gardens, trees and fruit trees. I was brought up on a Rana Palace and its surrounding estates. My grandfather, a general knighted by British Sovereigns in the First and Second great World Wars, and his four brothers were all very fond of their magnificent gardens, horses and cows. There were no fertilizers or poisonous insecticides then and crops were bountiful. I carry out the same practice now in my one acre villa garden. I keep four cows, one heifer, one goat, a few chickens and ducks and sometimes rabbits and bees. Right in the middle of Kathmandu city, it is God's gift.

I studied agriculture in college in 1947 and joined the army afterwards. In the army I strongly propagated small home farming for my soldiers, Gurkhas from the hills of Nepal. I learned a lot from China in the 1950s, but our old traditional vegetable farmers of Kathmandu were and are still the greatest in organic self-sufficient small holdings.

I am now lifetime ADC General to His Majesty the King. Now their Majesties have commanded me to build a centre for the **Social Services National Coordination Council** in Nepal. This Council is chaired by Her Majesty the Queen. All the national, regional and international NGOs working in Nepal come under its umbrella. I am now trying my best to explain "small is beautiful". Nepal is small, and over 90 per cent of the population are small farmers with a farm holding of less than one acre each. Though fertilizers, and nowadays insecticides, are being pushed more and more by ugly big business lobbies, we have not given in. But deforestation by politicians has ruined our hill soil and ecology. It is alarming.

Perennial grass, fodder trees (Ipil Ipil type), organic livestock, and crop farming is the only answer. During the last thirty years of our new development era, American, British, United Nations, and other big aid groups have totally ignored small organic livestock and crop farming suitable for our people on the small farms of Nepal. They have also ruined our thinking and practical habits. The Green Revolution on one side, and deforestation causing natural landslides and soil erosion on the other, are daily known happenings. Very alarming!

This is the right year and time to change the big ugly practices by establishing a few small models. I have been working on this for the last five years. The first three years alone, but now not quite so. I have hundreds of friends amongst poor but wise farmers in the hills, dales, and valleys and terai of Nepal who can create models for practical village education, extension and production. They can also serve as a lesson to our people in power and those who matter. The Minister of Agriculture; the Secretary of Agriculture; and most, if not all, of our educated youngsters in agriculture are in favor of small and small scale association-type, Rodale- and practical sufficiency- type, and home farm-type models. Nepal is the Mecca for it all. His Majesty the King has advocated that the General Staff officers of the Royal Nepalese Army read the book **Small is Beautiful**. I have practiced it with missionary zeal.

Even intermediate technology industrial hydro-power is too advanced here. It will be great if in some way we, the Gurkhas and the British can once again fight this battle against hunger and for world survival jointly. It is no use going through International Aid and Government bureaucracy. Those ships are too big and too committed to begin to turn over to our side.

Therefore I will be grateful if some really genuine organic development move could be organized from your side to help me here in studying; and the collecting, collating, and processing of information; so I can present it to the public and people in power. Please give it a thought. Though we in Nepal cannot express ourselves as precisely and strongly in English as Dr. E.F. Schumacher, I can assure you that we can show much progress in the fields and farms of Nepal by using "The Small Farmers Nepalese Technology".

As I am alone here in this matter and have spent a lot of enjoyable time, as well as more personal resources than my family appreciates, you all will have to

continued on page 17

# Health On the Rocks

## *by Suzanne and Henry Sutton*

Our friends Susan and Vivian Gander live and work on a wind swept 800 acre sheep farm near Wellington, New Zealand.

We arrived on their sheepy, emerald green paradise toward evening, having driven down from Auckland Area.

On the other side of hugs and hellos, and having pried their T.V out of a locked closet, we settled down to the continuing thrills of the winter Olympics.

Later that evening, after stuffing the T.V back in the closet, I was presented with something a bit more pithy, Hamaker's book, **The Survival of Civilization.**

The reading of the book eventually lead us to exploring the Franz Joseph and Fox Glaciers on South Island.

We gathered the dust on the flood plain of Franz Joseph in little dried pools, just below where the opaque Gray River gushes from the mouth of the Glacier.

Hamaker had stated that he had begun taking from 1/4 to 1/2 teaspoons of rock dust daily to remineralize his body. I wondered how he fared in his experiments. Years had passed since he had written his book, and I've had no update on the matter. Unknown heavy metals came to mind.

Yet I was fascinated with his ideas and took the plunge. The results were immediate. I awoke the next day peering through the eyes of a predator. I felt fantastic and ate like a fit young lion. I packed down my morning glass of muddy glacier silt. The feeling of YES carried that day and many others after.

Slowly, unnoticeably at first, my hair began to thicken. It went in six months from a fine, wind-blown haystack to a thick shock of hair that stands upright for the first inch and defies a brush. I loved it!

The rest of my crew were less taken with the romance of eating rocks, and noticed very little, one way or another.

I energetically proselytized acquaintances, friends and family about the great benefits of nature's own mineral supplement.

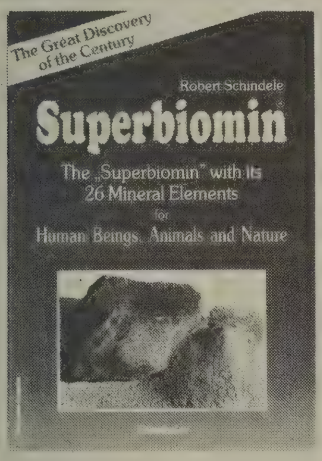
However, hair wasn't all that was getting denser. Recently Suzanne and I both noticed the fog had been rolling in. A short term memory loss and a general mental fuzzyness had been creeping in for about the last month.

Suspecting the rock dust, we discontinued its use and within days, we could notice our minds clearing. So much for the Franz Joseph brand!

That brings us to the present --we would like to have our glacier dust analyzed. It is our guess that we exceeded the upper limits of one or more of the elements in it. It also seems pretty probable that great nature has provided for plants to do the balancing. So we are planning on heavily rock dusting the organic garden this spring.

But in the mean time, I am hooked on feeling good and have an eye out for the balanced rock dust product that Joanne Campe told us was being marketed in Europe. *[See article below-- ed.]*

**Henry and Suzanne Sutton**
Box 237
Hartland, VT 05048


The Great Discovery of the Century
Robert Schindele
Superbiomin
The „Superbiomin" with its 26 Mineral Elements for Human Beings, Animals and Nature

# Superbiomin
## *and a book in English available from Austria*

A book has been translated into English and published about Robert Schindele and his rock dust health supplement Superbiomin. The book is called ***Superbiomin with its 26 Mineral Elements for Human Beings, Animals and Nature.*** The back cover reports, " A chemical analysis proved: The stone flour contains minerals that plants need urgently. Minerals that are, in this composition also very helpful for human beings."

Schindele writes that, " From my own experience, and from the many letters of my clients who eat my mineral flour Superbiomin, diseases disappear that, up to now, were considered incurable. After only a few weeks, diabetic values of 280 and more, are reduced to 80-90, gout disappears, the blood pressure and all other values balance out to normal, the values of uric acid increase for a short period (dissolution of sediments) and then drop again quickly."

Schindele believes that "90% of all diseases of human beings, animals and plants are caused by the lack of mineral elements in our food, and therefore by the lack of mineral elements and by the lack of the respective bacteria. . . . Already in 1940, when the soil conditions were much better than today, the Swiss medical doctor, Dr. Zimmermann, who became famous by his book **Steine Geben Brot**, wrote the following: 'Our food no longer deserves to be called food; we only fill our stomachs.' He also suggested that the appropriate minerals should be eaten, as has already been done by old civilized nations thousands of years ago. He wrote on this subject: 'The digestive tract of the human being is of vegetable nature. From now on, give stones in the form of finely ground stone flour to humans--tiny quantities are dissolved, just like it is done by plants; the rest leaves the body without doing any harm.' (Sand cleans the stomach, a proverb says.) Therefore a human being can very well eat 100 grams of stone powder without enduring any bad effects. . . .

"The formation of stones in the kidney and in the bile cannot happen, since the formation of stones is caused by the lack of mineral elements. . . .

"Only if in agriculture all fields and meadows are constantly fertilized with all the necessary minerals (which is only possible with stone flour containing a lot of silicon which contains all the necessary elements) we will again have healthy food, healthy animals and healthy human beings, and we need no longer swallow minerals as a complement to the food."

One university professor observed patients taking the product for six months with very favorable results, saying that "with this mixture, the mineral metabolism is again fully compensated." The professor writes, "If you want to avoid civilization's diseases. . . . change your eating habits. Eat preferably of green and leaf vegetables--well-balanced food with high nutritious value and add the minerals. There are no contra-indications, since, if you take too high a dose of these minerals they are discharged by every healthy kidney.

"This cure should be carried out during a period of six weeks in a very exact manner, then six weeks of pause, then repeat it. This cure should be made in autumn and in spring."

continued on page 18

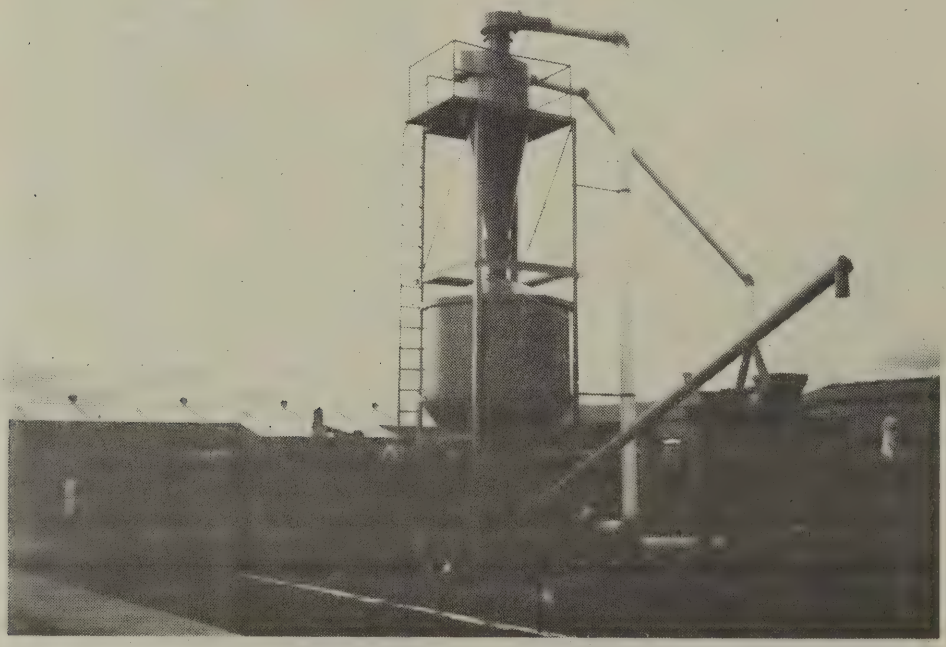
# Keith Gray
## *from New Zealand*

I have just recently received the Summer 1988 issue of **Soil Remineralization**, and have noted your comment on the back page.

I must apologize for not keeping in touch with you more closely, but you have already printed some of our research in Rotorua in previous newsletters. In these few pages I will endeavour to bring you up to date with what has been taking place from 1986 to 1988.

However, before I do so I would like to give you some brief details about myself. I own a 200 acre sheep farm in the center of the North Island of New Zealand. I retired from active farming about 15 years ago, but all during my active farming life I have kept a large organic garden in which I have carried out a certain amount of private research for my own pleasure and satisfaction. For the last 10 years or more, much of the research has been carried out on the use and application of rock dusts, and their place in agriculture and horticulture in New Zealand.

Hybrid Hawaiian sweet corn grown in Panorama Garden May 1984. Treated with rock dust at the rate of 1 tonne per acre. The corn on the right of the plot received no rock dust.



Barmac stone crusher used to grind mixed rocks down to 75 microns. The crusher is on the right of the picture while the cyclone is on the left. This machine will crush a 6 ton load of rock down to 75 microns in an hour. It costs about $80,000 to set up and uses 120 hp of electrical energy to operate.

I hold a diploma in agriculture and currently am a member of the Soil Association of New Zealand, and sit on the National Council of that body. In addition to that activity, I also enjoy membership in the Biodynamic Farming and Gardening Association, the Henry Doubelday Research Association of New Zealand, the Biological Producers Society, and the Henry Doubleday Society in England.

In 1981 I was responsible for calling together a small group with the idea of setting up a branch of the Soil Association in Rotorua. This we accomplished, and at the same time it was suggested that we make an approach to our local Administration Council for a grant of land on which to set up an organic research and demonstration garden. After some 2 and 1/2 years of negotiation, this was finally achieved. In June of 1984 we became the custodians of our 3/4 acre garden which we call **Panorama**. We gave it this name because there is a high concrete wall on three sides of the garden and one can walk round this parapet and look down on the garden.

**Panorama** is different from every other organic garden in this country in that its existence is virtually dependent on the extensive use of rock dusts as fertilizers. We have been using these dusts for four years now, and have been so pleased with our results that we are now able to go around talking to other

organic gardeners on the benefits that come from the application of these natural fertilizers.

In 1986, I was asked to go down to the Annual Conference of the Soil Association and present a paper on the use of rock dusts in organic gardening. Two workshops were held which attracted a lot of interest, to the extent that Betsan Coats came all the way over from Australia to hear what we had to say.

By the end of 1986, after working with rock dusts for two years, we had sorted out to our own satisfaction the principal benefits we had from rock dust usage. Briefly, these were that if rock dusts were incorporated into the soil at the rate of a ton per acre or more, they would produce crops of very large size and vigor, and these crops would have a greatly increased resistance to pests and diseases. It was also noticeable that the root systems of these treated plants were larger in size and extent. It also became apparent that plants grown in dust treated soil developed a greater immunity and resistance to frost, and were able to endure frosts of up to 4-5 degrees without being burnt off. This was of considerable significance to us as Rotorua is over 1000 feet above sea level and we can get a frost at any time of the year.

So, once having established all these basic principles, at the end of 1986 we started to look around at other methods of application. I suppose you could class it as a form of diversification.

The end of 1986 saw us in a far better position for sources of supply. It was possible not only to get larger amounts of rock, but we were able to get them ground down to a stage where 40% or better of the rock would go through a 200" mesh. It was found that these fine dusts could be turned into suspended liquid solutions, which opened up a new field of foliar spraying instead of soil injection. The results from this method of application show great promise. Some of the trials in operation at the moment may be of interest.

We have mixed up a spray of one tablespoon of fine rock dust plus a tablespoon of finely screened compost which has rock dust that was incorporated all through it at the time it was put together. The compost was dried and screened through a 200" mesh. These two materials were put into 2 liters of water and beaten, then allowed to settle so that any heavy material in the rock would fall to the bottom of the container. After an hour, the cloudy water was gently poured off and 1 liter was poured into a knapsack sprayer which was filled with water. The contents of the knapsack were sprayed onto some 7 dwarf peach trees which had been badly affected by curly lear. They were a sad sight and most of the affected leaves fell off. The trees grew a second crop of leaves which were far from impressive. Out of curiosity, these trees got a good covering of this liquid rock dust and compost. When I came back in 3 weeks time, the results were astonishing. In this intervening period these trees had produced a massive crop of beautiful and healthy leaves so that it was hard to believe one was looking at the same trees. This heavy crop of leaves stayed on the trees till well into the autumn before they fell off. There appears to be a follow up effect this spring as the trees have produced a very heavy crop of blossoms which has withstood the effects of two frosts of -4 degrees Celsius.

**"Panorama is different from every other organic garden in this country in that its existence is virtually dependent on the extensive use of rock dusts as fertilizers. We have been using these dusts for four years now, and have been so pleased with our results that we are now able to go around talking to other organic gardeners on the benefits that come from the application of these natural fertilizers."**

This mixture of dust and compost has given such good results that we have taken some of it and made a homeopathic sample by potentizing it to 8 D. One drop of this is dropped into 500 liters of water and sprayed straight onto the thistles. It is very effective in killing thistles which wither away at the end of a fortnight. I am going to do the same thing with rock dust in the hope that it will have a beneficial, rather than a lethal effect. Wheat seeds sprouted with rock dust and compost solution, and have grown 3 inches in 10 days, whereas other similar seeds sprayed with the potentized solution have only reached one inch. I feel that further research needs to be done on this so that we can get the same result as the thistle trials. One bottle of 6 D will be enough to innoculate 5,000 liters. A similar potentization of 6 C will be enough to innoculate 50,000 liters. I have been putting the one drop of potentized dust and compost into 200 liters and testing this solution with a crystal pendulum. Prior to the rock dust injection there is no reaction from the crystal, but after this one drop goes in and the water is stirred the crystal will start to swing in a clockwise motion, and it will continue this reaction for up to 26 hours. I'm not sure if it means that the water becomes dead after that period. It would seem so if one takes the results of the wheat seed sprouting trials. There is a great deal of work to be done on this yet.

On the 19th of September we took the first step on a 400 day journey to try and find out if we can increase the mineral content of cereal grains, by treating the soil in which they are growing with rock dust fertilizer. To the best of my knowledge we have not done any work on this in New Zealand, but work on it has been done overseas. We will be sowing some inorganic wheat and also a biodynamic variety. One lot will be grown in soil treated with rock dust, one left as a control, one sprayed with rock dust liquid, and one sprayed with a homeopathic solution. This trial will carry through until January-February of 1990. If you have information on work of this nature in the States I would appreciate a copy of it.

Well, that is about all of our news at the moment. As you can see we have been busy in the time since you recorded some of our work at Ngakuru in the early rock trials. It looks as though we are going to be even busier in the days to come.

All the rock dusts mentioned in these trials consist of North Carolina rock phosphate and a mixture of Egmont gravel. You have chemical analyses of both of these rocks in earlier editions of your *S R* newsletters.

## Nepal
continued from page 14

provide the inputs for the venture. If we do a research here first and then decide about the funding, I am sure there could be some organizations here who would also back us up. All we need are a couple of youths who have good education and at least three years of practical experience in small vegetables with two to three cows type of gardening. It is important that the study team have a good background and experience.

Anyone from the *SR* who is interested in these matters and comes to Nepal should please visit my house. I'll be only too pleased to offer them a lunch, tea or dinner at my place in Kathmandu, and to advise them on what to do and see while in Nepal.

Let the gods of Nepal help you in meeting this great challenge.

**Gen. Aditya Shamsher J. B. Rana**
Babar Mahal Villa
Kathmandu, Nepal

*From Australia*

## Environ Management Association

**G.V. Lawrence, AM**
**51 Lisson Grove**
**Hawthorn, Vic 3122**
**Australia**
Tel (03) 818 4512
or (03) 650 3846

**AN INVITATION**

We seek your interest and membership in joining with us in finding out solutions to some of the ecological problems now threatening this planet and our very survival.

Our special thrust is to persuade the Australian Parliament to consider (on on all-party basis) all environmental factors affecting climate change and to examine these implications thoroughly and scientifically.

We advocate that members be active in promoting:

1) Better land and water management, taking guidance from Yeomans' Keyline principles and other proven land and water resource management practices.

2) Use of alternative organic and remineralization processes such as the use of compost, organic matter, rock dust and other natural mineral resources to improve soil structure.

The cost of membership is $25 for 1988. There will be progress reports at frequent intervals. We planned a general meeting for late fall-early winter to report and, with all members' help define activities from 1989 onwards.

There are also some sustaining members who each underwrite a contribution of $100.

Following are statements summarizing EMSA's philosophical position, and listing with some detail foundation and continuing members.

I will be pleased to hear from you and hope that you will want to join us.

**G.V. Lawrence, Hon. Secretary**

## The Environ Management Systems Association

EMSA, formerly the consultancy Environ Management Systems Australia, is now an association of independent people with professional or promotional interest in policies and programs designed to encourage practical application of environmentally sound management of soil and water resources.

Members will promote the EMSA messages through their own more specialized firms, calling on each other for sub-consultancy or joint venture arrangements where appropriate.

Members are also very greatly concerned with the direction of basic climatic change. It is their perception that our Planet Earth is sorely stricken environmentally with afflictions that carry the threat of terminal illness. They affirm that survival of civilization on our planet can be assured only by an adequate ecological approach based on restoration of soil fertility. Dual components of remedial action which EMSA can address are:

for agriculture greatly increased organic content of the world's soils

and for both agriculture and, particularly, for forestry mobilization of the potential of finely ground minerals.

These remedies can be labeled as "Humus" and "Rock".

The Humus imperative takes much guidance from the Keyline System of land-and-water management, originated by the late P.A. Yeomans, which makes productive and safe use of all water that falls on or can be brought to any area of land including irrigation and also aims to achieve profit and beauty from the neglected asset of waste water and sewage effluent.

"Rock" encapsulates Hamaker and Weaver's recommendation and program of widespread use of finely ground minerals of a wide spectrum, largely to replace chemical fertilizers.

EMSA will offer two classes of membership:

(a) all those in every walk of life who subscribe to the proposition described above and who see EMSA as one means of educating the public and the Government on the magnitude and urgency of the problem, and for pressing government for action.

(b) those who also see EMSA as an aid to promotion of their respective expertise and professional consultancy.

continued from page 15

"This is how you take it: mornings and evenings dissolve one slightly heaped teaspoon of minerals in a lot of good water, since the super-mineral swells a bit, slowly add a lot of fresh water, and drink slowly."

The book has many testimonials of people who have taken the product. In ***SR*** **#7**, we reported that the USSR picked up 2000 kg of Superbiomin for use after the Chernobyl catastrophe. Studies in Vienna and the Ukraine have shown that Superbiomin acts against radioactivity.

**Trace Elements**

| Element | mg/kg |
|---|---|
| Natrium | 195.0 |
| Copper | 37.2 |
| Zinc | 85.9 |
| Cobalt | 18.3 |
| Molybdenum | 0.1 |
| Boron | 9.8 |
| Chromium | 85.8 |
| Nickel | 40.6 |
| Vanadium | 69.5 |

Mineral Content

| | |
|---|---|
| 30 % | Alkali feldspar |
| 20 - 30 % | Plagioclase |
| 20 - 30 % | Quartz |
| 15 - 20 % | Biotite |
| 5 - 10 % | Disthene, Garnet, Silimanite |

Accessory Materials:
Ore, Zircon, Rutile

## To Order Superbiomin:

Superbiomin can be ordered directly from us, as we still do not have a distributor in the U.S. One kilo (2.2 lb) without transportation costs U.S. $5.30. With shipping charges:

2 kilo bag is $22.00
6 kilo bag is $53.00
10 kilo bag is $81.00

All prices listed in U.S. dollars and paid in advance. We cannot accept checks for small amounts as checks cost about $10 to process. So if a check is sent this extra fee should be sent for bank charges.

If you wish to purchase Superbiomin to sell retail/distribute, we can send 504 kg at U.S. $3.50 per kilo. Transportation is extra. Find out the cost from your shipper. This would need to be paid with an Austrian certified check.

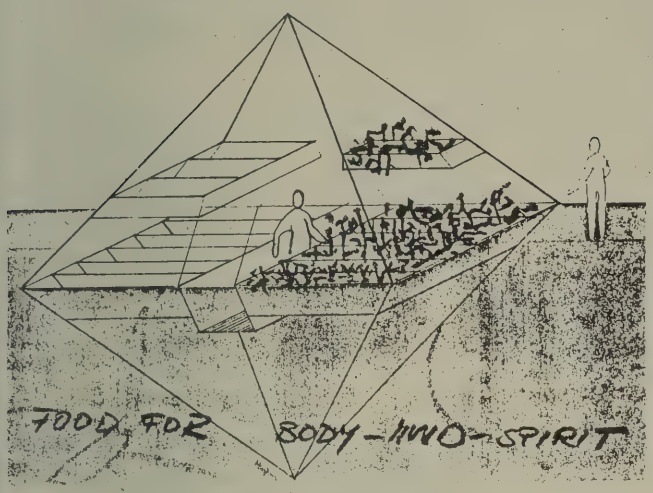
**Mineralwerk**
**Robert Schindele and Co. OHG**
**A-3122 Gansbach-Kicking, Austria**
**tel. 27 53/ 289**

## To order the book:

There is no distributor in the U.S.. The book can be ordered directly from the publisher:

**Wilhelm Ennsthaler,**
**Verlag und Buchandlung,**
**Stadtplatz 26**
**A-4402 Steyr**
**Austria**

No price was given for the book.




# Diamond Health and Food Inc.

## Mineral Rich-Health Promoting Food

## Through Double Pyramid/ Greenhouse Gardening

### General Purpose:

1. to construct and operate prototype models of enclosed food land plants as well as health promoting environments and habitats.

2. to market vegetables, plants, spices and medicinal herbs organically grown on mineral rich soil and in enclosed environments.

3. to market custom built enclosed food growing and health environments and habitats.

4. to research, document and publicly present results of alternative food growing with high quality mineral dust in enclosed environments.

5. to do anything a person can do.

**Short term goals:**

to build one double pyramid greenhouse (starting 8-8-1988) to organically grow mineral rich sprouts and herbs and to build up a business market consisting of restaurants, health food stores, food buying clubs.

additionally, to grow mushrooms in the lower part of the same pyramid and to develop a heating system that can extend the growing period in the pyramid.

**Medium term goals:**

start a sprout, spice, herb and mushroom store in Santa Fe, offering organically grown and mineral rich products.

build another pyramid creating different climates: for vegetable growth, and for example, orchid growth.

**Long term goals:**

developing and marketing of custom-built pyramids for food growing and for individual health environments with flower gardens and hot tubs.

**Possible goal:** establish a local rock dust producing enterprise.

Here are four different ways you can be a part of the **Double Pyramid Greenhouse Project** by the DIAMOND HEALTH AND FOOD Inc.

1) **SPONSOR:** (on a basis of individual mutual agreement) - you can fully or partially sponsor:

a) construction material for the double pyramid greenhouse 20' x 20' x 12'.
b) high quality seeds and powdered mineral rock.
c) any amount towards operation and advertising costs.

2) **MEMBER:** (ask about one-year membership options; participating in a food buying cooperative).

3) **CONSUMER:** comes in on a regular basis to buy mineral rich, high quality greens at retail prices. A consumer interested to purchase at wholesale prices pays a monthly or annual fee.

4) **GROWER:** anyone can buy from DIAMOND HEALTH AND FOOD Inc. a custom built and ready to grow double pyramid greenhouse (purchase price includes installing pyramid in your backyard or on your favorite land spot).

You can also get involved in spreading the idea of remineralizing the depleted earth so that health promoting food can be grown.

As you can understand from the included material on nutrition, our foods that are used to nourish and protect us from disease are now nothing but a shadow of their former selves, nice looking empty shells with almost no contents - because we have virtually depleted the environment in which they grow (soil water and air pollution).

"You are what you eat" is not just a philosophical amusement, but has become a physical, emotional and spiritual reality, which we can experience daily.

Four months ago, our entire family started to take, on a daily basis, Super Blue-Green Algaes (a mineral rich, valuable food) which we added to our already more or less health conscious diet. Our experience of energy increase and well-being made us even more aware of how important it is to eat quality food that again contains the minerals, amino-acids, vitamins etc. that our bodies need to be healthy (remember how vegetables and fruits used to taste long ago?).

Obviously many questions come up: is it possible to be not only partially but completely in charge of our own health? How could you have any control over food-growing? How could you grow high quality food in almost totally depleted soil? How could you account for pollution and weather/climate changes?

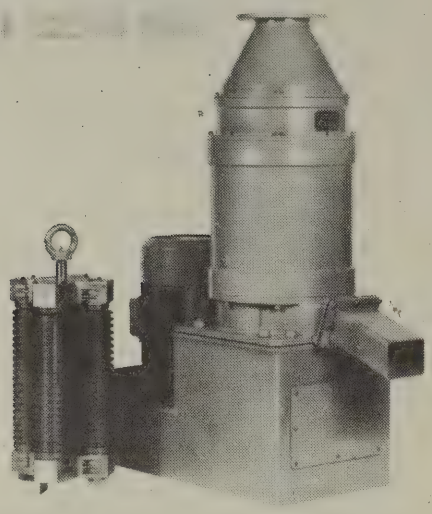
All those questions and many others lead us to exciting concepts and projects different people are working with. Inspired by the concept of remineralizing the earth, Daryl Kollman's double pyramid project in Oregon and our own studies in pyramid energy, we decided to take full responsibility for our own health and well-being.

We are excited to share with you our project of building locally (25 miles east of Albuquerque) a double pyramid greenhouse (20' x 20' x 12") where all greens will be grown with high quality powdered mineral rock, and through which we will be able to provide you with mineral rich, high quality sprouts, salads, spices, herbs, and vegetables.

We invite you to be part of this project in any way that feels right to you.

For more information contact:
**Katarina and Kosta Becker**
**Star Rte 112-1**
**Tijeras, NM 87059**
**tel. 505-281-8442**

**GCI**
**General Comminution Inc.**



## *Features of the Szego Mill*

The Szego Grinding Mill is characterized by low specific energy consumption and a high specific capacity, typically forty times larger than for tumbling mills (expressed in tonne/h,m3 of mill volume).

The mill is suitable for both wet and dry grinding. Wet, it can handle all consistencies from thin suspensions to thick pastes. Dry, it can be air-swept. Wide mill speed variability and independently controlled feed rates provide unprecedented grinding flexibility, useful for dealing with tough-to-grind materials. Size reduction from 6 mm (1/4") down to the ultra-fine (10 microns) range is readily attainable. Grinding can be combined with mixing, leaching beneficiation, chemical reactions and other processes, in open, closed and locked-cycle circuits. And, yet, the capital investment for a Szego Mill is a mere fraction of that conventional grinding equipment of comparable capacity.

*Mill Characteristics*

High Specific Capacity
Low Power Consumption
Dry and Wet Grinding
Slurry and Paste Grinding
Ultrafine Grinding
Flexibility in Operation
Versatile Applications
Combined Operations and Processes
Low Capital Cost

For more information, write to:

**GCI**
**General Comminution Inc.**
1 Spadina Cr. (#205)
PO Box 70, Station P
Toronto, Ontario,
CANADA M5S 2S6
Telephone: (416) 591-5494
Telex No. 06-966685

# PIT AND QUARRY MAGAZINE

Gary Elder of Clemson, South Carolina writes that this magazine is an excellent resource for the latest in crushing, grinding and sizing earthen materials. It also lists used equipment for sale. $25 yearly subscription.

For information write to:

**Pit and Quarry Magazine**
**P.O. Box 6380**
**Duluth, MN 55806**

Pit and Quarry (ISSN 0032-0293) is published monthly by Pit and Quarry Publications, Inc., a subsidiary of Harcourt Brace Jovanovich Publications.

Write and ask for a sample copy.

Along with the latest products and technology is a classified section with used pulverizers and crushers, ball and rod mills, etc.

## *In a letter from Bob Love to Don Weaver....*

**"The garden was a big success. All plants responded in the rock dust area. I weighed the potatoes and one row has 35% more and the other row had 48% more potatoes. The carrots, squash, cucumber, tomatoes, onions, everything showed response. I only wish I could get enough dust for my entire farm."**

**Robert Love**
**Love Grain Company**
**Harmony, Minnesota**

**SR reported the earlier results of Bob Love's garden in the previous issue. On May 12, 19 88 he applied 9 tons of gravel dust and 2 tons of compost per acre.**

## Market Sought for Montana Invention

**from the Great Falls Tribune, Great Falls, Montana 8/1/1988**

"A Montana Rock Press spews out a stream of small-size gravel during a demonstration."

Eldon D. Whitey Blumer's press combines the functions of three separate rock crushing machines- a jaw crusher, rollercone and fine-head machine--into a single machine mounted on a flatbed trailer. The press carries out the functions of the three machines in a single operation.

The Montana Rock Press has one moving part in the press itself, which does not include the crushed rock transporter systems, compared to 480 moving parts in the three machines it replaces, and maintenance requires less time.

The firm plans to manufacture the machine in seven models ranging in production from 90 tons to 130 tons per hour up to the largest machine at 500 tons to 600 tons per hour. Blumer said each machine will be constructed to include the specific features requested by the purchaser.

Price ranges: the smallest is 3ft sq 36" by 36" and starts from $227,813. It produces 135 tons an hour at 2" minus. A larger one, 8 ft sq or 96" by 96" produces 500 tons an hour and starts at $607, 500.

For more information contact: Al Dosch, Al's Diesel Inc, 1117 East Railroad, 406 Cut Bank, Montana 59427, tel. (406) 873 5601.

*editor: In an interview with Al Dosch, he said that the machines could be adapted to produce large quantities of 200 mesh gravel dust. While this does not fulfill the need for an economical small scale machine to be used by farmers, it might be useful for larger scale industrial production for larger projects.*

# Society for an Extended Ethic, Inc.

This report covers the results of sifting samples of our local rock dust source (Michigan Aggregates, Jerome, Michigan) to give you some idea of the kind of information that this donated sifter (RX-24 Portable Sieve Shaker) can reveal abut rock dust sources. It can also be used in a limited way to actually extract only the 200+ fines for eventual use. I say in a limited way because it is a small machine and can only sift approximately 5 pounds at a time. Our use of this machine will be primarily for determining quantitative mesh-size content of samples, and to produce 200+ size samples for pot-test purposes.

If others from the network wish us to test samples of rock dust from their sources, we could do this, provided that they send approximately 5 pounds worth (must be completely dry) plus a self-addressed stamped envelope for us to return to them the test results. We would not of course be returning the sample material itself.

**Debra Vuckovich**
**1139 Woodside Trail**
**Troy, MI 48098**
**Tel (313) 828-4179**

## Rock Dust Sifting

**General:** This report provides quantitative results for the sifting of small quantities of rock gravel particulate. The material was sifted as an effort to determine an approximation of particle size distribution. Of special interest is the percentage of particulate on the order of 200 mesh or smaller ("rock dust").

**Material Source:** The material sifted was obtained from Michigan Aggregates located in Jerome, Michigan (517-688-4414). It is on the order of 1/8 inch or less in particle dimension. Michigan Aggregates considers the material too fine for their commercial use. Their process involves grinding rocks 1.5" to 4" down to 3/8" size or larger using cone crushers.

**Shaker:** The machine used for sifting was a RX-24 Portable Sieve Shaker manufactured by the C.E. Tyler Corporation, PO Box 8900, Gastonia, NC 28053.

FIG. 1

11-13-88
R. NONNENMACHER

**Setup:** The shaker will hold six sieves and a final non-sieve collection container. These sieves are about 8 inches in diameter and about 2 inches deep. Since 200 mesh material was desired, and we knew only a small fraction of the gravel dust would be this small, 200 mesh was used as the final sieve with five smaller sieves on top. Shown in fig. 1 is the sieve arrangement that was used. In order from top to bottom they were:

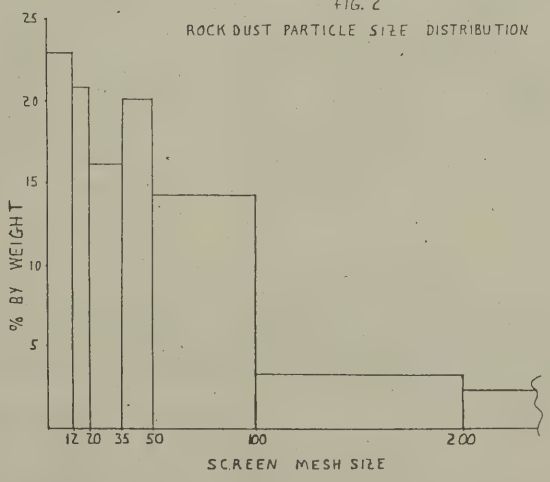
| Mesh Size | Opening Inches | Opening Microns |
|---|---|---|
| 12 | .0661 | 1680 |
| 20 | .0331 | 841 |
| 35 | .0197 | 500 |
| 50 | .0117 | 297 |
| 100 | .0059 | 149 |
| 200 | .0029 | 75 |

**Results:** The results of sifting are shown in the table below. The number followed by the plus sign indicates that the listed weight is the amount of material left in the sieve after sifting and is material larger than the screen opening. For example, the amount of 1169.2 grams in 100+ is the amount of particulate that was left in the 100 mesh sieve and is larger than the 100 mesh screen opening but smaller than the 50 mesh screen opening. These results are also shown in fig. 2.

| Mesh Size | Weight (Grams) | Percentage of Total |
|---|---|---|
| 12+ | 1871.30 | 22.95 |
| 20+ | 1698.40 | 20.83 |
| 35+ | 1310.10 | 16.07 |
| 50+ | 1643.90 | 20.16 |
| 100+ | 1169.20 | 14.34 |
| 200+ | 265.53 | 3.26 |
| 200- | 195.96 | 2.40 |
| Total | 8154.39 | 100.00 |

**Conclusions:** Only 5.66% of the material sifted is smaller than 100 mesh and only 2.4% is smaller than 200 mesh, or classifiable as rock dust. Here only 8.15 kg (about 18 pounds) of material was sorted. Sifting a larger amount of material, or sifting material from a different source, should produce a different distribution as would choosing a different screen arrangement. This material, however, could serve as feed for a machine which would produce the desired particle size.

FIG. 2
ROCK DUST PARTICLE SIZE DISTRIBUTION




Ron Nonnenmacher
Brian Menzie
17-Nov-1988

# Institute For A Future

## *The Imminent Ice Age And How We Can Stop It*

**Record cold winters again and again, record summer heat and drought, increasing floods, hurricanes and tornadoes, dying forests, massive fossil fuel burning and the clearcutting of the tropical rainforests. All these may be related.**

**The next ice age may be virtually upon us, a natural 100,000-year-cycle driven by erosion of soil minerals, the death and rebirth of forests, and the rise and fall of carbon dioxide and other greenhouse gases. It has already resulted in massive starvation.**

**If we act quickly, we may be able to stop it. If not, we may stop eating in less than seven years.**

"One of the most relevant books since the last ice age." *--Robin Williams*

"An astonishing service for humanity." *--Kenneth Watt, Professor of Environmental Studies, University of California and author of the Annual Review of the Environment for Encyclopedia Brittanica*

"I consider this completely valid." *--Victor Kovda, former president, Scientific Committee for Environmental Problems, International Council of Scientific Unions*

"This is must reading." *--C. Bertrand Schultz, Director, Institute for Tertiary-Quaternary Studies and Nebraska Academy of Sciences*

"This theory is very plausible. The actions recommended here are urgently needed to avoid a global disaster." *--Paul Gersper, Professor of Soil Science, University of California, Berkeley*

"This deserves the most urgent attention." *--Walter Corson, Global Tomorrow Coalition*

"The significance and timeliness of this material cannot be overstated. We have absolutely no time to lose." *--Greg Watson, Secretary for Science and Technology, the Commonwealth of Massachusetts*

The **Institute for a Future** is distributing a documentary film, **Stopping the Coming Ice Age**, and a book, **The End: The imminent ice age and how we can stop it**, published by Celestial Arts.

**Stopping the Coming Ice Age**, an hour-long film, is available for purchase in the following formats:

| | *Individuals* | *Organizations* |
|---|---|---|
| VHS, Beta | $20 | $65 |
| 3/4" videotape | $145 | |
| 16mm film | $675 | |

It is also available in 1" videotape for broadcast.

**The End** may be ordered from the **Institute** for $9. Quantity discounts are also available:

2 to 10 copies at $8.50 each
11 - 25 copies at $8 each
26 - 50 copies at $7.75 each
More than 50 copies at $7.50 each

Payment can be made by cash, check, money order, VISA or MasterCard. Purchase orders also accepted.

A $20 tax-deductible membership in the **Institute for a Future** will bring you periodic updates of new information and ideas for our survival. Tax-deductible contributions will be used to publicize this information as quickly as possible worldwide.

We would like the film/video **Stopping the Coming Ice Age** to be shown as quickly and widely as possible.

*You are welcome to make a copy for any friend who agrees to send us $10 immediately, in order to save time. (You may not make a profit on these copies.)

*If the video or film is shown for an admission charge or asked-for donation, please contribute 1/3 of the net proceeds to the Institute. We are practically giving the tapes away, and need cash flow.

*Feel free to approach local PBS and cable TV stations to show the film. We would like to be paid for these showings, on the order of about $800-1000 from bigger stations, down to $3-400 from the smallest. Please let us know of any such showings. (We will negotiate.)

*For those who might like to sell videotapes at conferences or other settings, we can offer a 10% discount on paid orders of 25 or more tapes, 20% on 50 or more to one address at one time. (Book discounts too.)

Finally, ground mixed gravel dust is not yet widely available. People who want to begin remineralizing their gardens immediately can start with a product called "Clodbuster", made from ground lignite--it is ancient organic matter, but is reportedly 30-40% minerals. Hamaker says he is getting good results with it, in drought-plagued Missouri. It is available from Agronics, Inc., 701 Madison NE, Albuqerque, NM 87110. (505) 298-1748. It costs $3.50 per 50lb. bag, or $110/ton, plus shipping. (Some local distributors needed.)

We also urge you to approach local gravel pits and cement manufacturers and see if they can provide crusher screenings that are at least 1/6 of 200" mesh mixed gravel dust. And local machine shops and factories which might be interested in manufacturing one or more rock grinders. Please keep us informed of any successes.

The **Institute for a Future** would greatly appreciate financial contributions to help carry on our work. Our cash flow situation is terrible, as with any start-up operation. All contributions are fully tax-deductible. (Federal tax ID# 94-2952101: California approval also, since 1983.) Any size contribution -- $5, 25$, $100, $500, $1000 or more-- will be most welcome.

---

Please send me:

__copies of The End at $____ each: Total $____
__copies Stopping the Coming Ice Age at____each Total $____
Which format? (circle) VHS Beta 3/4" 16mm
Tax (7% Alameda County, 6.5% Bart Counties, 6% California: ____
__Memberships at $20 each ____
Postage and Handling $ 2.00
Grand Total $____

Name_____
Address_____
City, State, Zip_____
If paying by credit card, circle one: VISA Mastercard Card#_____
Expiration date:_____ Name on card, if different:_____

Send orders to Institute for a Future
2000 Center St., Berkeley, CA 94704
Phone orders, too.
(415) 524-2700
I also want to support the urgent work of the Institute for a Future with a tax-deductible contribution of: $____

# LIVE EARTH

**The World Broadcast on our Common Future: A Program of the Orbit Productions International Foundation**

830 20th Street #103
Boulder, CO 80302
Tel (303) 447-2754

## A Summary of the Earth Fund Programs

The **Earth Fund** initially will focus its resources on the following critical environmental programs:

**Soil Remineralization/Tree Planting Campaign** -- to control $CO_2$ buildup, retard desertification and prevent negative climate change

**Save the Ozone Campaign** -- public education and action to eradicate the man-made factors responsible for the dangerous ozone loss in the high atmosphere

**International Debt Swap Programs and "Gene Pool Creation Projects"** -- to preserve the rain forests in Latin America, Africa and Southeast Asia

**Save the Seas Program** -- public education and action to find viable and safe alternatives to the dumping of toxic wastes in the oceans, overfishing and water pollution

An International Board of Advisors is currently being developed to assist with these efforts. Those members include: Academician V. Sokolov, the U.S.S.R. Academy of Science; His Excellency Dr. Khalid Mansour, Vice Chairman, World Commission on Environment and Development and former Deputy Prime Minister of Sudan; Dr. Rodrigo Carazo, former President of Costa Rica; and the Honourable Mr. Digvijay Sinh, Member of Parliament, Government of India.

The **Earth Fund** is committed to working cooperatively with environmental and future-planning organizations from all regions of the world. The purpose is to contribute to the implementation of effective programs which assist in creating a balanced and sustainable future for all the inhabitants of our world.

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# Solar Age or Ice Age? Bulletin #10 Near Completion

## The Upcoming Bulletin Needs Funding

Don Weaver is working on the completion of the latest Bulletin for the end of December. As in past issues it will include the latest **Comments** by John Hamaker and other priceless information. It is *the* source book for serious networkers compiling the most recent data on climate, forests, glaciation, weather extremes of all kinds, earthquakes and tectonic activity for the last year along with the tremendous spirit of inspiration that has sustained networking efforts around the world. ***SR*** recommends the **Solar Age or Ice Age? Bulletin** as essential reading for the Earth Regeneration movement and urges you to send a donation of $5.00 or more if you wish to support the publication of this timely journal and receive your issue of the Bulletin.

Please make checks out to the **Solar Age or Ice Age? Bulletin** and send to Don Weaver, Hamaker Weaver Publishers, P.O. Box 1961, Burlingame, CA 94010.

**Name**_____

**Street/Box**_____

**City**_____**State**_____**Zip**_____

**$_____I would like to make a contribution to sustain and expand the Bulletin outreach.**

# E.A.G.L.E.

## A Heart to Heart Effort

You might think this article is about saving the Eagle, and in a sense it is. We The People of Ruidoso, a small south-central mountain village in New Mexico, have just given birth to an organization called **E.A.G.L.E. - Environmental Action Group Loving Earth.** This article is about its conception.

**Institute For a Future,** a non-profit educational corporation in Berkeley, California, produced a wonderful 56 minute video entitled **Stopping The Coming Ice Age**, Larry Ephron, Producer. This video relays a message of hope for all life on this planet. It stimulates people into action, action that is needed at this time to regenerate Earth, the Life Support System that many of us have taken for granted. Many years of depletion and ignorance have left the Earth and many of us out of balance. The time is **NOW** for us to correct that and give back the "Balance of Beauty" to ourselves and our ever nurturing Mother Earth. This is truly a professionally done documentary of the recurring cycles of the planet and how with a Global Effort at this time we can continue to co-exist with our beloved Earth!

This video came to Ruidoso near the beginning of August. We were so moved on a planetary heart level about this important information that we made a commitment to act and to share this information with anyone and everyone willing to view it. We (three action-oriented people) started on a community level by calling a Town Meeting at our Public Library. We set a date of September 7, 1988 to give us 3 weeks to prepare. We made up 100 fliers and posted them all over town. Our two radio stations broadcast public service announcements about our upcoming meeting and our only newspaper listed our meeting in "Coming Up". Of these three sources of advertising, "one on one" flier distribution was the most effective.

We were pleased at the turnout of 43 people, being a small village of 6,500. We started our presentation with music as people were coming in. Two environmentally conscious songs--"Look Out Every Window" by Bruce Hornsby, and "It's a Small World" by Huey Lewis-- helped set the mood. We then introduced ourselves and shared our feelings of urgency on a global scale for our environment. We held up newspaper clippings from all over the world about the radical climate changes that were happening, emphasizing the universality we all share with climate conditions, favorable or not. Hurricane Gilbert was right on cue for this meeting.

After viewing the video as a group, there was a sense of "Ah", and the same sense of urgency that we had felt the first time. It was getting exciting now! This group would not even take a stretch break. There were questions, comments and ideas flying all around the room. We passed around a name sheet and 31 out of 43 signed it (we now have an active core group of 22). We also had hand-outs available for future information and contacts. We had 10 copies of the video (by permission) to loan out for one week. This proved to be very successful. **The Survival Of Civilization,** by Hamaker and Weaver, was also available for sale. After 2 1/2 hours of discussion, we reluctantly went home committed to return the next week to organize. Two Letters To The Editor and one article were printed in our newspaper. We were pleased. The next evening on ABC, Hugh Downs presented a program of mutual concern called "The Poisoning of America"! It was excellent.

Twenty-five attended the second organizational meeting and organize we did. Three Co-chairs were appointed and 8 committees were formed: Remineralization, Recycling, Public Relations, Political Action, Resources, Community Gardening, Clean Water and Energy Alternatives. We passed around the name list and everyone chose a committee. We then broke up into committee groups to plan our course of action. There were several ideas for naming this group but none sounded right. We decided that the purpose of this group was "to actively inform and educate our community and others about the immediate concern for our future on all levels".

**A Special Note:** We have the privilege of neighboring the Mescalaro Apache Reservation. We were honored that a Tribal Medicine Man attended our meeting and shared Earth teachings with us. He took the video with him to show to the tribal council. Networking with Native Americans who share such respect for our planet was a good beginning. His basic message to us was "Show Me".

We met two weeks later to hear committee reports. Two wonderful things happened at this third meeting. A newcomer to our group presented us with the name **E.A.G.L.E., (Environmental Action Group Loving Earth).** This newcomer was from the New Mexico E.I.D., (Environmental Improvement Division). As soon as he said it, we all knew that was it--time for letterhead, bank account, and non-profit status.

The other wonderful thing that came out of the meeting was the idea for sponsoring an Environmental Fair in our community. The theme was **Helping The Earth We Love.** What a perfect way to raise environmental awareness! Our small local shopping mall agreed to house our fair. We set our date for November 5th and met weekly to organize this community event. Booths planned for our fair included: Solar (2), Recycling, Community Gardening, E.I.D. Water Testing, Remineralization, Water Purification, Consumer Action, the Forest Service (Smokey the Bear and Woodsey Owl), Children's Activities, Book Sales & Reference, Little Creek Food Coop, Weather Ports, and Information & Involvement. Also planned were four video showing areas: Solar, Water, Stopping The Coming Ice Age, and Poisoning of America.

To encourage environmental awareness in our children, we organized a program to reach out to our school system. We presented the video to our school superintendent and our six principals, who made it available to 150 teachers. We have even heard that the science teachers in the mid-high and high schools are showing the video to their classes. The final step of this reach-out program was to create an **Environmental Awareness Poster Contest** for all children 5-18 years of age with 5 age groups participating, and winning entries receiving prizes on the day of the Environmental Fair. We planned to use five local artists as judges and to give ribbons to each participant.

A few last thoughts:

We presented the video to our Village Council Members and to thirty of the Village Workers. This gave us more media coverage and community contacts.

After the Apache Tribal Council viewed the video, they decided to find a source of "Rock Dust" to distribute over their many acres of forest land. We are now helping them find a reliable source.

We have many acres of fruit tree orchards around us; some of the orchard growers that have seen the video are anxious to try rock dust on their land.

We are patiently working with our local gravel grinding company. They are not real sure yet about this sudden rock dust demand. Another promising source of rock dust comes from White Oaks, a little mining town about an hour away. They have been very helpful and have supplied us with 300 mesh rock dust for experimentation. We now await sample lab results on 3 different kinds of rock dust, optimum results being a variety of trace minerals and lack of any harmful elements.

continued on page 29

# Letters and Forum

## International Developments

Many thanks for the copies of the SR Newsletter and the research packet which arrived here safely. I have started some work on soil remineralization and will keep you informed of the outcome.

Thanking you once again for your positive response and congratulations for the excellent work you are doing.

**Michel Pimbert**
**Principal Entomologist, Legumes**
International Crops Research
Institute for the Semi-Arid Tropics
**ICRISAT** Patancheru P.O.
Andhra Pradesh 502324, India

Many thanks for the Spring '88 Newsletter which I haven't yet had time to read. We returned last week from a peace cruise down the Dnieper, organised by the Ukrainian Peace Committee. It was absolutely breathtaking in so many different aspects, not least the deep spirituality of the Russian people that transcends anything one can observe in this country, or I would venture to suggest in the West in general.

We ended the visit, in company with some 300 other peace activists from all over the world, being addressed by Mr. Gorbachev in the Kremlin, literally hard upon his seeing off Mr. Reagan at the airport or wherever it was. He gave us 3 hours of his time, speaking to us and listening to what we had to say and receiving all manner of gifts. His final plea was for each of us to go away and work in a practical manner to achieve better communication and understanding in the interests of world peace. I think ***SR*** is one of these ways and I hope that we may make contact with some of the Russian researchers who apparently are trying out ***SR***, or similar principles, to redeem the Ukrainian soil around Chernobyl.

When we were in Vienna we met with two scientists, Dr. Gernot Graefe (environmental consultant to the Austrian Ministry of Defense) and Dr. Maria Felsenreich. Both are deep into research into ***SR*** and also the energy relating to the marriage of humus and rock dust--which is what Hamaker is advocating. Today I am waiting to take delivery of 300 kg of Austrian rock dust, sent to us as a gift at the suggestion of our two friends. I want to parcel this around to strategic places, including at least two schools and some research establishments, and I want the Austrians to guide us on the kind of research they would like us to undertake, for it is imperative that we begin to create a proper 'curriculum' for this kind of activity. I hope this won't take too long to get underway, but for the schools it will be a matter of beginning a project in September with the new academic year since the holiday period is upon us very soon.

**Eirwen Harbottle**
**London Centre for**
**International Peacebuilding**
London, England

I acknowledge with thanks the receipt of your packet, containing a set of papers, which is very informative and useful to us. Will send you comments etc., later. Will also be grateful for any other related literature.

**Korah Mathen, Secretary**
**SAMVARDHAN Association**
**for Propagation of Indigenous**
**Genetic Resources**
Ahmedabad, India

I am an extension agronomist in the Ministry of Coffee and Tea Development in Ethiopia. I believe your newsletter could be of great value to my kind of work.

Would you be kind enough to send me some of your earlier ***SR*** newsletter copies and also please let me know how to join the Network.

**Gebremariam Shekour**
Addis Ababa, Ethiopia

Thank you very much for your letter and all the materials which I hope to receive shortly. I'm looking forward to receive the material and start some work on soil remineralization. I will to the best of my ability try to do as much as possible to promote simple, low-tech sustainable methods of agriculture.

There is an acute shortage of local technicians at the moment and the first batch of our students will graduate in early 1989. In the next few months we hope the expatriate agronomists will be able to come together and collectively promote certain technologies. I hope to be here until the beginning of 1990 and plan to stay for a further 2 years or more.

I'm also looking for a local person who in the future will take up the position of Hamaker Coordinator. I could assist this person during the period of my stay so I'll keep in touch with you from time to time.

**M.C. Pereira**
Kampuchea, Cambodia

Recently I read your name and your address in CAUSES newsletter to which I have subscribed. Please, is it possible to receive news about fine-ground river, sea-shore, glacial gravel and mineral-rich rocks and their property to remineralize and regenerate soil, and more beneficial advantages? (Strengthens growth, resistance to pollution and acid rains in trees, more vigor to plants and great increase in nutritive value in food.)

**Rodolfo Scognamiglio**
Torre del Greco, Naples, Italy

## In the U.S.

I just returned from Sweden (my home land) and am quite glad about the positive response I got there when I mentioned remineralization. However, I feel that I need more information especially more research results and figures--Swedes like to know the outcome before they test anything new.

I met a lot of people who understood the importance [of remineralization] and want to know more to be able to spread the information. So I now await with my regular impatience your newsletters and any other information you have.

I made one interesting observation during my recent trip: when they drill rock for blasting in Sweden, they have a way to collect all dust so that the workers don't get "stone-lungs". All that dust can probably be obtained for little or no cost. It comes in 200 kg bags. There is no guarantee that the dust is colloidal, but I am sure it is quite finely ground.

**Pillan Torstenson**
West Redding, Connecticut

I am writing a proposal for funding to travel to Japan and study natural farming with Mr. Masanobu Fukuoka. If it comes through, I will request funding from the same foundation for a research and experimental project in soil remineralization and natural farming in West Africa. I would like to do that for my master's thesis after May, 1989. I will be back in Brattleboro in April, 1989 to finish up my course work. I think that if I could be associated with an organization, like **Plenty USA**, it would be easier to get such funding. I am now in correspondence with them, and it looks like a possibility. Much of this has really come about through my acquaintance with ***SR***.

**Marian Rose**
**School for International Training**
Kipling Road, Brattleboro, VT 05301

Just received and read through ***SR***. Enjoyed both the discussions and the fact that many think as I do. Also hope my experience can help answer some of the questions.

I started out on a farm 80 years ago when most people were farmers and most farmers were "Organic farmers". After college my activities were in extension work across the U.S. for 12 years and then overseas for 18 years. On his organic farm, my father had top soil with life including enzymes in it. Water was stored for dry years and recently on TV they showed an Amish farmer only slightly hurt by the drought which was crippling to his neighbors. In Montana I helped a farmer develop organic farming and we saw an outstanding increase in productivity and profit. He had 3500 acres. In north Africa I demonstrated to the farmers on a 10 square foot area. In Ecuador I helped set up a farm of 30,000 acres with an organic farm program. These are just a few of the many I have had the privilege to help.

The one thing in common wherever there were sick crops and animals, was the lack of healthy soil. My father's farm was located on glacial moraine where healthy soil could maintain itself if a proper rotation was followed with letting legumes grow to turn under every three years. In Montana, it was dry and cool. The green manure crop of the rest year should help control disease, insects, and weeds. We used soybeans and soon had healthy soil. In North Africa, there were many tons of seaweed washed up on the shore and that supplied the soil with minerals so well that olives, which may take 16 or 18 years to start bearing, were producing fruit in four to six years. In Ecuador a farmer had brucelosis in his cattle. Fish scrap was being discarded on the coast. He took fish scrap which was not putrified and applied it to the farm land as well as feeding it to his cattle. In one year the cows were free from brucelosis and their milk production had increased 68%. At Brunswick, Georgia I persuaded an organic garden club to use sea water. (It should be applied soon after collecting when it still smells good and has not been exposed to heat or sun light which will kill enzymes.)

At Bay Spring, Mississippi there is an outcrop of trace mineral mix which has lain there for 92 million years or more. My wife and I believe the Lord placed it there for the time when farmers would need it it to restore the soil. It has 92 minerals plus about 2,000 compounds, all in organic form. Enzymes are in abundance and even in Florida soils, micro life is stimulated to wonderful activity when it is used. Georgia has a good supply of granite, but we should use every source available to hasten the return of our soil health. That does not include chemical companies though I have found that where there is an abundance of micro and macro life in the soil, one can add about a 20th of what the extension service recommends and get excellent results. It may be a little easier to understand when one realizes that the plants never benefit from more than 15% of the agri-chemicals applied to farm land. Compare for yourself: if you are in good shape and a horse kicks you a little, because you could escape, you may go bragging about it. On the other hand, if you are pretty run down and a horse kicks you, the kick might kill you.

Now I am improving on the use of the mineral and don't ask too many questions about why it works. I have seen it work.

Source of the mineral:

Flora-Stim
Strite's Warehouse
Box 128 Greencastle, PA 17225
(717) 597-3225

They will ship the mineral from the nearest point, either Mississippi or Pennsylvania. The soil may benefit from adding 100 - 250 pounds per acre.

Sandy Asbell
Box 1843 Rte 1
Tiger, GA 38576
(404) 782-2287

Using eloptic energy, Sandy can disperse the energy from the above mineral or any compound one wishes to apply to the land. I have seen tomatoes from California stand on a shelf for a month and still taste very good. Grapes, berries, fruit, and grain as well as turkeys and chicks are benefitting from this instrument. With cattle and birds, veterinary fees are cut to near nothing. With all crops, solids increase and disease decreases. Insects can be controlled but that is not important when your soil is healthy. Will welcome questions.

**George Gibbs**
**PO Box 155**
Grand Island, FL 32735

Feldspars being one of the most abundant minerals on earth, I believe them to be one of the most practical sources for remineralization. There are currently many companies active in grinding and supplying feldspars in the 200 mesh range which we desire for remineralization.

UNIMIN Corporation (800) 243-9004
258 Elm Street New Canaan, CT 06840

This company is a source of Feldspar (F-4, Raw) 200 Mesh sold by the ton.

The material is available in 50lb. bags @ $62.75 per ton, or in Bulk @ $48.25 per ton (both prices plus shipping).

This is the "fine flour" particle consistency desired for maximum organism activation. This material has a weight range of 65-70 lbs. per cubic foot; about 1 ton per cubic yard.

The range of Feldspar Chemical Analysis:

| | | | |
|---|---|---|---|
| $SiO_2$ | 67-68% | $Al_2O_3$ | 18-19% |
| $K_2O$ | 4-10% | $Na_2O$ | 2-10% |
| CaO | 1-2 % | $Fe_2O_3$ | 0.1% |
| MgO | Trace | | |

**Gary Elder**
Clemson, South Carolina

I wrote to Frank Prieto (listed in Glacial Gravel Sources) at Miami, Springs, Florida, but he never answered my note. I wrote to him twice, no answer both times. I thought you would like to know about it. He should not have his name in the Rock Dust Sources if he can't answer people's inquiries.

**Eddie Filer**
Naples, Florida

Mr. Hamaker remarked that the Szego mill was not suitable--well, with all due respect..., he is totally wrong. We ground river and glacial aggregates from the Toronto area to 200 mesh, and the machine works fine. They are in use throughout the world, from Japan to Venezuela. The problem is they do not as yet have larger (over 1 ton/hour) models, but when they do they would be ideal units, since they are relatively small and very energy efficient.

**Bruce Miller**
Toronto, Canada

*editor: see page 21 for details on Szego Mill. Perhaps they can fulfill the need for small economic units?*

I would be very interested in your Newsletter and specific plans for a rock grinder-- and suggestions toward whom I might contact near here that's involved with remineralization.

I just read about your newsletter and networking in Michael Pilarski's publication **The 1988 International Green Front Report**.

I first heard of remineralization in the the winter of 1987 while studying at the New Alchemy Institute semester program. Greg Cumberford gave me your address but I misplaced it before writing you for more information. I'm amazed how much time has passed but I've been busy trying to start a farm in the southwest corner of Vermont, right next to Williamstown, Massachusetts and Hoosic, New York.

I would like to use rock powders in my greenhouse this fall and winter, both in growing plants and making compost. I've yet to read anything about using rock powders--except as a direct soil amendment- perhaps of composting with rock powder. Would larger particle sizes become more effective if composted with horse manure and bedding- prior to using soil application? Will rock powders enhance the composting process?

I have tons of rock piled up in stone walls here on this old hill farm-- just waiting to be ground up and incorporated into the surrounding wood lot's soil. I plan to be harvesting firewood with my horses and expect I could incorporate the rock dust into the soil around the timber trees I leave, while skidding out the culls. Lots of quartz/silicate rock in this area.

This year I have one or one and a half acres cultivated vegetables plus herbs. I hope to double that next year and with your help perhaps I'll produce 4 times the produce! I must admit to finding the claims made about rock powders awfully hard to believe and am anxious to see for myself. Also, in the smattering of remineralization literature I've come across the tone is always somewhat frantic and the focus is very macro-- remineralize to save the world or humankind from impending ecological calamity!

It seems to me that the people I know who are involved with farming hundreds of acres--that is to say, the real powerful people in my community--come from the exact opposite world view. What I mean simply is that when I go to the farmer next door --who has been farming here all his life-- to suggest applying rock powder to his corn fields, I wouldn't dare mention anything about this process being a means to avert an impending Ice Age; to do so would be to lose all credibility with this very pragmatic individual--even if I'm fortified with exceptionally clear proof: dates, plant specimens, side by-side plots, etc. If he thinks I believe the earth is coming to an end if he and everyone else doesn't start spreading rock powders about, how can he believe I have conducted unbiased tests?

Hinze Grotskey, who founded Meadow Brook Herbs in Wyoming, Rhode Island presented me with a very animistic version of the "greenhouse effect" that I would like to share:

Fossil fuels are essentially trapped spirits--elemental beings. When they were loose upon the earth there was no room or opportunity for the spiritual organism that is human. Burning the fossil fuels releases these elemental beings in a very helter skelter manner; once enough of them are on the loose again, humans will be eclipsed again, unless we can find ways and means to co-exist with them--in which case the world would become a better place then it was when they dominated or when they were all trapped down under and we developed. Obviously the way to deal with them is to incorporate them in living biomasss --and remineralization promises to be the appropriate means. The rock grinder is the tool!

**Steve Chamay**
Bennington, Vermont

Thank you so much for keeping me on your ***SR*** mailing list. ***SR*** means so much to me, as a totally reasonable, sensible, and terribly important idea/action; and although my main focus of activity is in other areas ("the new economics"), I tell people about ***SR*** whenever I find myself in any sort of appropriate environment.

Just the other day I was chatting with Greg Watson about some other work we will be doing together, and in the course of the conversation, we both agreed on the need for "guerilla rock spreaders," and we will hopefully find some ways to informally spread good rock dust around in the Boston area--at the very least.

**Barbara Brandt**
Somerville, Massachusetts

I received ***SR*** Spring 1988 & Summer 1988 about one week ago--many thanks. I do have some comments on ***SR***--ice age--reforestation--so here are a few.

First: I'm in agreement with communication with John Hamaker about 2 years--that there is not the chance of "a snowball in hell" of stopping this glaciation cycle now. Slow it down, maybe, but basically using this time for small "awake" groups to "batten down the hatches" and learn to live with what's happening.

To that end, much of my research has been aimed at weatherproof housing and plant growing space--both best underground in my opinion--as well as collecting lots of information on plant communities that a family or group of families in an area can get established to create "micro climates" and food, fuel, fiber, medicine, etc. sources in self-sufficient communities.

Second: for remineralizing soils you need a source of rock and rock grinders. It seems to me that many in the soil remineralization movement are stuck on John's home-made grinder as the one to use. No one has yet started large scale production of usable grinders. There are thousands of makes and models of rock grinders, crushers, ball mills that produce 200 mesh fine dust!--from hand crane models a ten year old can carry around in his pack to small power models suitable for backyard use to giants that weigh hundreds of tons. They are available new, used, and free for the scrap value. They are used for ore grinding, cement grinding, etc. So--if anyone or group wants to grind their own gravel, grinders are available. Look in popular mining/popular prospecting magazines and in the phone Yellow Pages, or contact "State Mining Associations" for lists of suppliers.

There is a real opportunity here for someone or group to get a scrap ball mill, move it to a suitable gravel pit and grind up enough dust for everyone in the community--or you can get a small backyard model and grind for yourself and friends. *[editor--see page 21.]*

Governments (U.S. and most others) are not going to take care of us. We must take care of ourselves and our friends and neighbors.

I grind my gravel in a mortar with pestle made out of 2 old iron pipe caps and a piece of pipe. I grind enough to make "pot tests" and "people tests."

My crude observation after drinking a glass of water with a tablespoon of dust in it is that if my body likes it, the plants might--and they seem to. Dust that does not give my body an almost immediate lift also does not seem to boost the plants. But this is a very subjective observation.

There is another possibility that I am curious about. When I drink dust recently ground, there may be an electrical (ionic? magnetic?) etheric field created which gives the "boost". Said "charge" may dissipate over time.

Hunza water is dust suspended in rapidly moving water with vortex action (see Patrick Flannigan) that may make the dust-water far more effective in stimulating plant growth. *[editor: This would certainly go along with biodynamic principles and the work of Schauberger.]*

Third: SR movement people also seem to be stuck on first having to remineralize the soil and then planting trees. I suggest that if soil mineralization can be done now, do it. If not, plant trees! anyway, and lots of other plants. They will grow and take carbon out of the atmosphere--lock it up--put oxygen back and create bio-mass. All needed now!

In New Zealand (where I lived) teenage kids plant 500+ trees per day. So any family or group can reforest their neighborhood. Play "Johnny Appleseed" and "Johnny Everyplant" around your hills. Look at trees, shrubs, herbs, grasses, etc. that create balanced plant communities.

Seeds and plants are often free (or very cheap) from State Forestry Departments or Soil Conservation Services as well as being available from thousands of seed companies worldwide.

Consider bamboo. Varieties will grow in hot, humid tropics; in arid regions; and in places where it freezes and snows in winter--thousands of varieties used for food, fuel, fiber, building material source. But the most important reason to plant bamboo is that it creates up to 10 times the bio-mass per acre per year of any tree shrub, shrub, etc.

Biomass means locked up carbon, released oxygen and lots of humus put into soils. Besides many varieties spread very fast, bamboo also rapidly create "micro-climate". Many of the plants you put around the mountains and valleys can be selected (both wild and domestic varieties) for food, fiber, and other uses, so that the "wilderness" returns toward a "liveable place" for the "wandering tribes which we may be during the coming (now?) glacial age.

I was very impressed with your comments on page 21 of ***SR*** Summer 1988, which is why I decided to write.

I'll stop raving on now and let you know that I have sources for lots of information on plants, underground buildings and greenhouses, and a hell of a lot more. I'd like to help if I can. How? Any suggestions?

My field is appropriate technology and environmental science/community self-sufficiency, but I have worked most in the borderland of established systems and some of my "suggestions" (great ideas) are considered "outlaw" which may explain why I'm in this prison!

**Jan D. Brewer, D-06498**
P.O. Box 8101, 2295
San Luis Obispo, CA 93409-0001

Thanks for continuing to send the newsletter although I had not re-subscribed. Enclosed you will find $12 to keep the newsletter coming. I am compelled to re-subscribe because of the "new directions" that surfaced in the most recent (Summer 1988) newsletter, particularly the article "New Alchemy in Austria" by Maria Felsenreich and the letter from Keith Johnson. The crushing of rock to serve human purposes has always seemed to lack a certain element of understanding and sensitivity. Where has anyone lent awareness that rocks too are living beings? It is very much like we humans to attempt to solve problems by beating them into submission, i.e. asserting our physical prowess and dominance over the situation. It's what has gotten us into trouble many times over. When confronted with disease, we throw great sums of money (energy) and try to beat it with chemicals, surgery, radiation, etc.--whatever we think it takes. We war on substance abuse and each other. Confronted with a planet dying from human excesses and mineral deficiency we again resolve to beat it into submission. Again our methods fail, as many are finding out. Hey folks, when will we come around to conscious cooperation? Where is our humility? When will we accept that powerful life forces pulse through this planet and learn to work with them? We have learned that minerals alone will not work, there must also be organic matter. And what else? What about a shift in human intent and attitude? Hadn't we better listen with open minds and hearts to dowsers, homeopaths, visionaries like Machaelle Wright and nature itself? Einstein said you couldn't cure a problem at the same level at which it was created, one had to rise to the next dimension. Jesus said if you had faith you could move mountains. Is there wisdom we are overlooking? Have we painted ourselves into such pragmatic corners that we must die of rigidity and inflexible thinking? Hopefully not. Let's open our minds and hearts. Survival depends on it. Let's hear more please!

**Dan Vega**
Fayetteville, Arkansas

*[editor: As the Earth crushes rock into dust through its 100,000 year regenerative Ice Age strategy, I do think mechanical means of remineralization are appropriate. Nature sustains itself through a principle of life contributing to life in an endless cycle of transformation. At the same time the transportation of rock dust and the use of energy and labor make remineralization an immense effort--though ecologically sustainable, and acceptable to most people. Transferring our use of rocks from the construction of freeways and buildings to restore the earth and the life of her soils already requires a tremendous transformation of consciousness. I would like to think that there is also a possibility to further attune to the earth and explore non-mechanistic possibilities as utilized in homeopathy, biodynamics and other possibilities, as well as mechanical means.]*

I have just finished reading your ***SR #9*** and ***SR #10*** which were buried in a pile of papers during a hectic summer. As always, it is heartening to read about the hope, enthusiasm, and activism of so many people with a global perspective. I was particularly thankful for the article by Gregory Watson in ***SR #9***. I am going to copy it and distribute it to several people I know.

He brings up an unanswered question of mine when he says, "Even if Hamaker's hypothesis linking demineralization with the ice ages is proven to be incorrect . . ." Lately I've seen some public television shows about the earth and climate changes which take the warming trend for granted and cite evidence from earth cores that show a $CO_2$/temperature correlation that is just inverse to what Hamaker cites. Also I'm beginning to notice gardening articles about xeriscaping to prepare for the hot dry climate ahead, and even Department of Agriculture predictions of higher yields in the rising temperatures, whereas one might plant hardier species than usual in a growing zone if a cooling trend is underway.

Would you consider doing an article in ***SR*** addressing these issues? I'm sure the members of the network would appreciate an explanation of the latest findings so they could debate more knowledgeably with people they are introducing

to remineralization. And how about a guess on next year's garden--cactuses or reindeer moss?

Speaking of networking, I'd like to cast my vote in favor of open-minded reporting in ***SR*** of remineralization efforts through non-traditional channels such as the dowsing, homeopathy and Perelandra elementals work that you and the network have mentioned in ***SR***. As an astrologer, I've noticed correlations between the exceptional planetary lineups in the 1980's and 1990's and the tremendous interest in earth healing that has begun to grow in both "scientific" and "new age" groups (not that they can't overlap). I have begun to reach out to the healers, psychics, and astrologers I know with the "hard facts" presented by the Hamaker network as well as the wonderful documented successes of remineralization.

I feel people who are working through spiritual methods of earth healing (and there are more than you may realize) can be powerful allies for remineralization by spreading the message and by hands on application of rock dust because they are often gardeners and environmentalists. Presenting them with bona fide successes of remineralization is important because so many psychic messages about negative earth changes have been circulating beginning as far back as Cayce in the 1920's and 1930's.

If you have any suggestions about outreach to this network I'd love to hear them because I am preparing an article on the remineralization efforts in light of astrological transits for publication in as many astrological and occult publications as I can contact and this is one of the reasons I want to get the facts about the core samples correct, as soon as possible.

Enclosed is $12 for my 1989 issues. Thanks again for all the wonderful work you are doing, and have a good holiday season.

**Judith Werner**
Bronx, New York

I have upgraded the Upweller project since I last wrote you about an idea.

Offshore drilling platforms are available from major oil and gas drilling companies. They can be used to send several strings of drilling pipes to pump up the rich mineral waters to the warmer ocean currents. This will mean we can multiply the growth factor of the diatoms which absorb carbon dioxide, which will reverse the greenhouse effects and cure the holes in the ozone layer. Diatoms will replace our lost trees and forests.

Did you know that dams blocked the growth of the diatoms for lack of minerals that used to flow freely to the ocean? We can bypass all these dams with large plastic siphon pipes to hold up the mud, silt, and detritus and pass them downstream toward the ocean again. Start raising those billions of dollars now! Pay the Corps of Engineers to loosen those mud, silt and detritus banks.

**Deralde Carwile**
Sweeney, Texas

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Our networking efforts with sister communities 2 hours or less from us has proven to be very successful. We have encouraged and supported similar "Town Meetings" in hopes of rapid education and action.

Hopefully after reading this article you too will want to see **Stopping The Coming Ice Age** for yourself. We truly need a **global effort** on this one! We have found that starting on a local community level was not only very successful but very rewarding. A Heart to Heart Effort! Time to remineralize this most Sacred planet we call EARTH!To quote Larry Ephron: "We need to put aside everything in our lives that isn't absolutely essential now, and get on with what is."

I would personally like to thank Daryl Kollman and Don Weaver for their undying support and encouragement that has inspired me into action. And many thanks to John Hamaker, a man, scientist and visionary with a whole picture, caring enough to share with the rest of us!

If you would like a copy of this article, hand-outs, and fliers that we distribute at our meetings, please send an optional donation to cover postage, paper and copy to:

**E.A.G.L.E.**
P.O. Box 3012 H.S.
137 Junction Road
Ruidoso, New Mexico 88345
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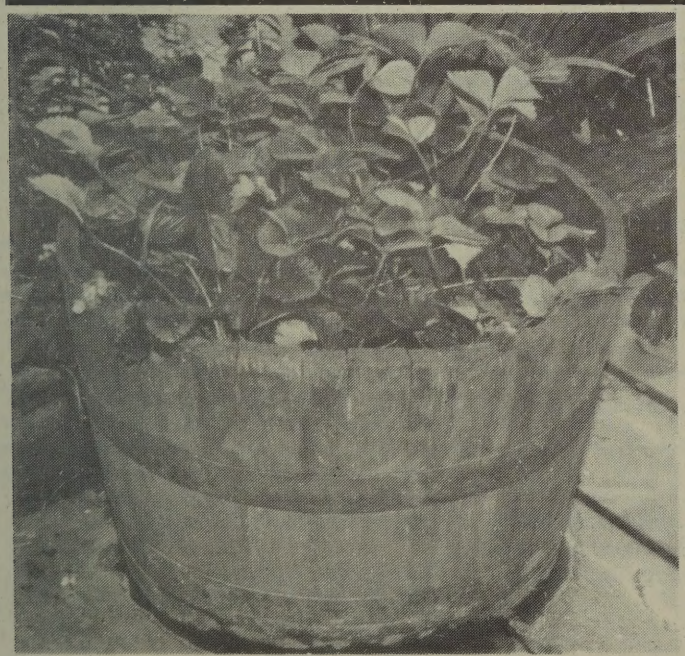

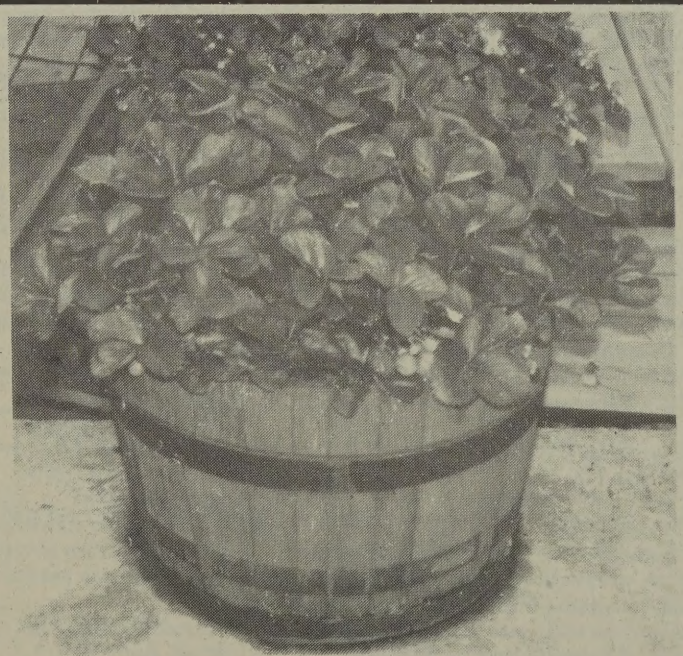

The first photograph is a strawberry plant without gravel dust and the second is with gravel dust. The photos were sent to the newsletter by Konrad Ruckstuhl of Rochester, Minnesota.

# The Network

Subscribers are invited to join the listing, so please let us know so we can include you. Listed in one issue each year, each subscriber receives all the issues of the year.

---

**Katharina and Kosta Becker**
**Diamond Health & Food Inc**
Star Route 112-1
Tijeras, NY 87059
(505) 281-8442
Double pyramid greenhouse project. Grows mineral-rich food. Interested in producing local mineral dust.

**David Bird**
Suite 2200, One Kendall Square
Cambridge MA 02139
Economic consultant.

**T.E. Browe, Sr.**
Rte 2 Box 71
Charlevoix, MI 49720
Has a good source of rock dust and began using it this year.

**Deralde Carwile**
401 E. 3rd Street
Sweeny, TX 77480
Desire green sand and clodbuster; also coal, lignite and shale samples to test idea for creating humus and natural gas from composting oil, coal, lignite, and shale.

**Doug Caswell**
410 Canon
Manitou Springs, CO 80829
(719) 685-4670

**Patsy DiRinaldo**
14-604 Washington St
Bolivar, PA 15923
(412) 676-4722

**Edward H Dorn**
PO Box 1505
Westport, MA 02790
(508) 675-2878
Design engineer, environmental consultant; water purification business since 1977.

**Elizabeth Draper**
PO Box 771
Tuxedo, NY 10987
(914) 351-2825
Interested in all forms of protection from, prevention of and cleaning up the toxic elements individually and their interactions with each other; interested in uses of dowsing and homeopathy.

**George P. Gibbs**
P.O. Box 155
Grand Island, FL 32735
See **Letters** this issue. Will welcome questions.

**Norma Gimlin**
2 Amherst Rd
Sunderland, MA 01375
Supervisor/distributor for Km mineral health supplement. General networker.

**Gold Mine Natural Food Co.**
1947 30th St
San Diego, CA 92102
(619) 234-9711
Mail-order macrobiotic and organic foods. Currently considering offering rock dust in the future.

**Golden Pathways**
17 Polaris Dr., North Star
Newark, DE 19711
(302) 239-4567

**Green Ark Cooperative**
1058 N. Cactus
Cottonwood, AZ 86326
(602) 634-0158
A new sandblasted art to collect rock dust.

**Philip Isely**
1480 Hoyt St., Suite 31
Lakewood, CO 80215
(303) 233-3548 or 526-0463
Secretary General, World Constitution and Parliament Association and member Provisional World Parliament. Interst: to implement World Legislative Bill #6 for the Emergency Earth Rescue Administration (copies available).

**Eric Johnson**
446 Smith Rd
Webster, NY 14580
(716) 671-7944
Professional gardener; interested in benefits of remineralizing calcareous soils with rock powders or glacial rock dust.

**Timothy Jost**
**Abundant Zest**
P.O. Box 655
Amherst, MA 01004
(413) 253-2257
Develops creative educational programs to foster environmental appreciation. Welcome networking with others.

**Elizabeth Martin**
RD#1 Box 169
Morgantown, PA 19543
(215) 286-9772

**Margaret McMillen**
14 Beston St
Amherst, MA 01002
(413) 253-9958
Member, **Pioneer Valley Greens.** Aid to the Agriculture Committee.

**W.E. Murnane**
PO Box 198
Apollo Bay
Victoria 3233
Australia

**New Energy Products**
**Gary Zuckett**
660 Main St
Pullman, WV 26421
(304) 659-3193
Mail-order products for energy conservation and personal health and well being. S.A.S.E. for product and price list.

**Arnold W. Rhodes**
3649 Humpton Rd.
Downingtown, PA 19335
(215) 269- 4013

**Stephen and Suzanne Rosoff**
Pine Grove Drive
Richmond, MA 01254
(413) 698-2884
Natural, organic gourmet food in a beautiful farmhouse in the heart of the glorious Berkshire Mountains for Bed and Breakfast.

**Fred Tighe**
243 Lincoln St
Lexington, MA 02173
(617) 861-8691

**Dr. Fred Bernard Wood**
2346 Lansford Ave.
San Jose, CA 95125
(408) 269-9327
Member of the **Earth Regeneration Society.** I provide climate change abstracts on the **CSIRI Computer Bulletin Board,** (408) 269-7045 300 baud, 7E1, send 2 CR's after carrier on for instructions, then **"READ ON-LINE-MAGAZINE.** My computer ID is **"csiri"** on PeaceNet, and **"Earth"** on EIES. For printed copy of **"Handbook for a Shareable Strategy of Coevolution with the Biosphere"** send $5.00 to CSIRI at above address.

**Lenore E. Yalisove**
1406 East Earl Drive
Phoenix, AZ 85014
(602) 274-0266
Macrobiotic center.

continued from page 3

pyramid greenhouses of Daryl Kollman of **Cell Tech, Inc. (Super Blue Green Algae)**. Daryl Kollman has plans for remineralization as part of some projects underway to be covered in a future issue.

**The Alaska Soil Association** and **Pacific Rim Soil Additives, Inc.** is the beginning of a major project just getting underway under the supervision of Fred Pankratz. We will cover the developments in a coming issue. It looks very promising and may include the participation of the State and University of Alaska, and Korea and Japan. There are a few other large scale projects which are just developing, very exciting and which *SR* hopes to cover in coming issues as they come closer to being realized.

### Re-circulating past issues

*SR* issues #3-4 double issue, #5, and #7 and #8 are currently out of print. As there are many requests for past issues I am circulating a few copies of each for photocopying and returning for re-circulation. It would be great to have more sets to continue to circulate in this way. If any subscribers would like to photocopy for themselves and donate their original issues for this purpose, it would be much appreciated.

Please send in your subscriptions as soon as possible in order to assure enough funds for the budget for the next issues of *SR* for 1989. Your support is greatly appreciated.

To end on a happy personal note: I am expecting a child in the beginning of March and it is clear this will for the next 6 months especially, be my major commitment. Assisting me in maintaining my commitment to the newsletter and taking over a lot of the computer work, editing, formatting, correspondence and subscriptions, will be Wes Brown and Kalpana Devi. I would like to thank them here for their tremendous help in getting out this issue.

### The *SR* Budget

On budget considerations, I would also like to add that so far, subscriptions cover the cost of mailing and printing of the newsletter and the correspondence, but not in any way telephone bills or the efforts of those people involved, whether the articles contributed, myself or assistants. Sharing the commitment of so many others in our network, the expense of the networking seems tremendously worthwhile and necessary, in spite of the personal costs. I would especially like to thank my husband Christian for making this possible. I feel so fortunate to be able to continue this far and thank you all for your contributions on so many levels, and in so many ways. May the New Year lead to further commitment, success and many breakthroughs.

**Joanna Campe**

# 1989 Subscriptions

It continues to be more practical to ask subscribers to renew at the new year and make sure each new subscriber receives all the copies of the year. You may have a complimentary copy and then find it is part of your subscription. The 3-4 copies each year will include all those who wish to be in the network listing and *How To* articles do not need to be repeated in every issue.

Rather than a commercial newsletter, it is a community grass roots network that stretches to every continent. Writing is contributed by the editor and others of the network. Single copies are available for $3.00. A U.S. subscriber helps to subsidize the cost of an outside the U.S. subscription with its high mail costs. That explains why there is little price difference between subscriptions inside and outside the U.S.

The aim is to network around the world where remineralization can offer ecological self sufficiency in place of dependency on unhealthy chemicals, pesticides and herbicides. Remineralization needs to take place worldwide.

Printing a newsletter with a small circulation is relatively expensive per issue. If you feel you cannot pay $12 (U.S) or $15 (outside the U.S.), contact *SR*. This newsletter, as much as possible, is available to all those who wish to receive it. If you wish to exchange publications or you have some other exchange/request for a subscription, please contact *SR*.

Thank you, readers, for your contributions: results of remineralization, photos, articles, experiences, and initiatives on a local or larger scale, be they commercial or cooperative-- *SR* is the reflection of all of you out there!

# Subscriptions 1989

**I would like to receive *Soil Remineralization, A Network Newsletter*. I enclose a check (made out to Soil Remineralization) for $12.00 in the U.S. or U.S.$15.00 (outside the U.S.), for a 1989 subscription (3-4 issues). Single copies are also available on request. Send to *SR*, 152 South Street, Northampton, MA 01060.**

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